

JPRS 74743

10 December 1979

# East Europe Report

ECONOMIC AND INDUSTRIAL AFFAIRS

No. 1962

**FBIS**

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<b>REPORT DOCUMENTATION PAGE</b>		1. REPORT NO. JPRS 74743	2.	3. Recipient's Accession No.																		
4. Title and Subtitle  EAST EUROPE REPORT: ECONOMIC AND INDUSTRIAL AFFAIRS, No. 1962		5. Report Date 10 December 1979																				
6.																						
7. Author(s)		8. Performing Organization Rept. No.																				
9. Performing Organization Name and Address  Joint Publications Research Service 1000 North Glebe Road Arlington, Virginia 22201		10. Project/Task/Work Unit No.																				
		11. Contract(C) or Grant(G) No. (C) (G)																				
12. Sponsoring Organization Name and Address  As above		13. Type of Report & Period Covered																				
		14.																				
15. Supplementary Notes																						
16. Abstract (Limit: 200 words)  This serial report contains information on economic theory, organization, planning and management; major agreements on and development of trade within CEMA and outside the Bloc; articles on all aspects of the materials, services, machine, electronics, and precision equipment industries; and concepts and attainments in agriculture, forestry, and the food industry.																						
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<b>b. Identifiers/Open-Ended Terms</b>																						
<b>c. COSATI Field/Group</b> 5C, 13I																						
<b>18. Availability Statement</b> Unlimited Availability Sold by NTIS Springfield, Virginia 22161		<b>19. Security Class (This Report)</b> UNCLASSIFIED	<b>21. No. of Pages</b> 100																			
		<input type="checkbox"/> <b>Security Class (This Page)</b> UNCLASSIFIED	<b>22. Price</b>																			

(See ANSI-Z39.18)

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**EAST EUROPE REPORT**  
**ECONOMIC AND INDUSTRIAL AFFAIRS**  
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INTERNATIONAL AFFAIRS

NEW 750-KILOVOLT POWER LINE INAUGURATED

Budapest MAGYAR HIRLAP in Hungarian 31 Oct 79 pp 1, 7

[Article by Nandor Bognar: "Inauguration of 750-Kilovolt Powerline"]

[Text] Inauguration ceremonies were held Tuesday in the Ministry of Heavy Industry to mark the setting into operation of the 750-kilovolt powerline between Albertirsa and Vinnyitsa and the facilities linked thereto.

After the opening speech by Antal Kovacs, department head of the MSZMP, the inauguration address was given by Dr Pal Simon, minister of heavy industry, in the presence of Jozsef Marjai and Dr Gyula Szeker, deputy premiers of the Council of Ministers; Istvan Soltesz, minister of metallurgy and machine industry; and the foreign socialist partners who participated in the joint powerline investment: delegations from those countries and their ambassadors in Budapest, or their representatives; and the representative of the CEMA secretariat.

In the name of the delegations of the interested socialist countries, Nikolai Alekseyevich Lopatyin, deputy minister of energetics and electrification and head of the Soviet delegation, praised the newly inaugurated facilities and at the same delivered the greetings of the Soviet energeticists to the Hungarian builders.

Thereafter, in recognition of the outstanding results achieved in the joint investment, Dr Szeker presented the awards. Pal Lazar, powerline technician of the National Electric Power Line Enterprise, received the "For a Socialist Hungary" decoration, and Dr Bela Csikos, technical deputy manager of the National Electric Power Line Enterprise, received the gold "Work" decoration. Eight persons received the silver "Work" decoration and 14 the bronze. Gyorgy Sugar, secretary of the Iron Workers Trade Union, awarded five workers the "For Trade Union Work" decoration.

The inauguration ceremonies were ended with the strains of the Internationale.

At the recommendation of the 66th session of the permanent CEMA Electric Energy Committee, representatives of Bulgaria, the CSSR, Poland, Hungary, the GDR and the Soviet government in 1974 decided that they would jointly construct one of the largest electric energy facilities of the second half

of the 20th century, the 750-kilovolt Vinnyitsa-Zapadnoukrainskaya-Albertirsa powerline. In the decision, the most impressive classifications were no exaggeration. They covered innumerable technical and economic features.

Beginning with the technical side: Hungary is at present the fourth country in the world, the second in Europe, which has built a 750-kilovolt powerline and station. The 268-kilometer powerline ties the Soviet Union's southern energy system together with the unified energy system of the CEMA countries, and thus in respect to geographical dimensions, the unification of the world's greatest electric energy system has been accomplished.

Among the technical-economic advantages of the linkup, we must include the fact that the possibilities for electric energy deliveries has in this way been increased. After being put into operation, for example, the planned electric energy deliveries from the Soviet Union to the other CEMA countries may increase by 1,200 megawatts--and let us add thereto about 1,500 megawatts of power plant capacity saved by the coordination of the participating countries' consumption "schedule" and the plants' reserve performance. On this basis, it is clear why the experts regard the setting into operation of the intersystem linkup as qualitatively a new chapter in CEMA electric energetics.

The construction of the power line and the facilities linked thereto also required new solutions from the economic side. The entire powerline--842 kilometers long--from Vinnytsa to Albertirsa, and the two 750/330 kilovolt transformer stations in the Soviet Union and one of 750/400 kilovolts in Hungary were built by the Soviet Union and Hungary. Bulgaria, the CSSR, Poland and the GDR participated in the work with the supply of equipment and the construction of other powerlines. The basis for the distribution of costs is, on one hand, the extent of imported energy from the Soviet Union and, on the other hand, the power plant performance savings by the participating countries in the cooperation of the systems. It is on this basis that the cost share of the individual countries was determined.

Almost one-half of the costs of the 750-kilovolt powerline and station built in Hungary, for example, will be paid by commodity deliveries from the various countries, or in the case of the CSSR with the construction of a 400-volt powerline. If we take this into account, the Hungarian share in the creation of the long distance powerline linkup comes to more than 30 million transferable rubles in value. In addition, the 400-volt powerlines branching to the various CEMA countries from the terminal point at Albertirsa were built, on Hungarian territory, by Hungarian experts and have a value of about 41 million rubles.

#### Unity, Indirect Effects

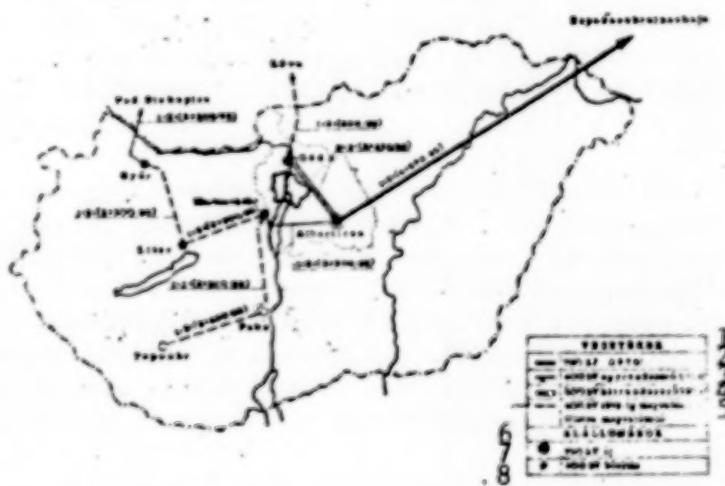
In yesterday's inauguration speech, Dr Simon emphasized: We must speak with appreciation of the achievement of the participants in the investment

realized by joint resources. On the basis of the international agreement, the authorized representatives of the six countries directed the work and in the course thereof had to solve various, entirely new problems. Among these we must include, for example, the verification of the technical plans, the approval of the engineering solutions, or the working out of appropriate methods for sharing costs of operational difficulties. These results provide a good basis for the organizational development of cooperation in the joint building of 750-kilovolt powerlines in the future.

The building of the high-voltage powerlines and the facilities linked thereto has also stimulated the development of the Hungarian electric network to a faster tempo. For the relaying of the incoming electric energy, we had to expand the basic Hungarian network with additional 400-kilovolt elements. (The voltage of the electric current delivered at 750 kilovolts, that is, at a particularly high tension, is transformed to 400 kilovolts at transformers located at receiving stations.) It was in this way that we established the 400-kilovolt powerline for a total distance of 160 kilometers between Albertirsa and God (dual system), between Györ and the national boundary and between Albertirsa and Martonvasar (both single systems). Four Hungarian stations were expanded with 400-kilovolt equipment, creating thereby the transformation possibility at 120 kilovolts in the onward branches.

We have more than once also reported in our newspaper of the difficulties that had to be overcome in carrying out the tasks. The particularly high-voltage connecting equipment and the powerline presented an unaccustomed

Map. Network Facilities Linked to 750/400-Kilovolt Energy Transmission



- |                                      |   |
|--------------------------------------|---|
| 1. Powerlines                        | 5. 400 kilovolt realized by 1978<br>or being realized |
| 2. 750 kilovolt [1978]               | 6. Stations   |
| 3. 300 kilovolt single system [1978] | 7. 750 kilovolt, new                                  |
| 4. 400 kilovolt dual system [1978]   | 8. 400 kilovolt, expanded                             |

task not only because of dimensions; the methods of installation also differed basically from those employed heretofore. During the course of the tasks, the Hungarian experts studied on a number of occasions the 750-kilovolt facilities already operating in the Soviet Union and maintained direct relations with other suppliers and planners as well. All this was of great help in maintaining the tight deadlines.

Although it is difficult to measure the importance of a facility of this type, the magnitude of the work performed may be sensed from several of the figures which the Hungarian experts have noted. The Hungarian builders, accordingly among other things, used about 55,000 cubic meters of concrete, 20,000 tons of iron structures, 10,000 tons of cables, and 5,600 tons of electric machines mostly of Hungarian manufacture. Judged against the performance capability of the Hungarian manufacturers--and we must not forget their other tasks--these magnitudes are extremely great and required much greater production than earlier achievements. For example, the manufacture of the Ganz 750/400-kilovolt--1,100-megavolt amperes--transformer clusters opened a new chapter in the Hungarian manufacture of transformers.

Almost 150 enterprises and institutions participated in the powerline and facility tasks. At peak periods, about 1,000 workers were engaged at construction locales. Among the cooperating enterprises it is worthwhile to make special mention of the domestic general planner, the Power Plant and Network Planning Enterprise; among the builders, the No 22 and the Gyor Megye State Construction Industry Enterprise; and among the technological installation enterprises the Electric Power Plant Planning and Implementing Enterprise. Among the suppliers of materials and equipment, worthy of special mention are the Danube Iron Works, the Ganz Electric Equipment Works, the Hungarian Cable Works, and the Electric Apparatus and Equipment Works. The National Electric Power Line Enterprise carried out unique activities in the implementation of the powerlines and stations.

#### Finished by the Deadline

Dr Simon, minister of heavy industry, said in his inauguration address the following about the work of the Hungarian participants:

"We had to realize in about 4 1/2 years the largest, up to now, concentrated network of the electric energy industry. Taking into account also the connected 400-kilovolt networks constructed during the years of these tasks, we had to carry out a high-voltage network development equal in extent to the total work of the preceding 20 years. Moreover, during this relatively short period we had to solve various new engineering problems, and in such a way that the research-development results could be usable immediately with the construction.

"Despite the significant difficulties that cropped up from time to time, we succeeded in meeting the deadline undertaken by the government for the start

operation, the minister of heavy industry emphasized. In accordance with the general agreements made by the participating countries, the 750-kilovolt linkup was ready by October 1978. The measurements and trials preceding operating were begun as scheduled. An outstanding date in our electric energy system development took place on 4 November 1978 when after the successful trials the Hungarian section of the powerline was first put under nominal voltage. Following this, on 5 February 1979 the two energy systems were linked up and the trial operation began.

The interested CEMA countries have already agreed on joint construction of the 4,000-megawatt atomic power plant at Hmelnyitskiy and a second 750-kilovolt powerline between Hmelnyitskiy and Rzesow. These tasks have already been started, but the technical-economic conditions for the joint establishment of other power plants, power-storage power plants, and power plants are also being studied.

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**DECREE RAISES WAGES, SALARIES, PRICES IN ACCORDANCE WITH FUTURE GOALS**

Sofia DURZHAVEN VESTNIK in Bulgarian 13 Nov 79 pp 930-933

[BCP Central Committee and Council of Ministers Decree No 50 of 10 November 1979 Raising Wages and Other Income of the Working People and Making Wholesale and Retail Prices Consistent With Objective Conditions for Developing the Economy and Upgrading its Effectiveness]

[Text] The shaping and establishment of the socialist way of life in our country brought about profound changes in all realms of social development. As a result of the tremendous work done by the party and the state and the constructive toil of our people for the implementation of the strategic slogan of high effectiveness and high quality, the material and technical base of socialism is developing successfully. Qualitative structural changes are taking place in the economy. The socialist organization of labor is being perfected and social labor productivity is rising steadily. Despite the adverse circumstances created by natural disasters, the intensification of the raw material-energy crisis, and the rise of the international market prices, on the basis of the successes achieved in the development of the economy and the enhancement of its effectiveness, following the 11th BCP Congress new successes were achieved in upgrading the material and cultural standards of the people.

Between 1976 and 1978 real per capita income rose 6.6 percent. Social consumption funds have been rising steadily. In 1978 they exceeded 4.2 billion leva.

Conversion to a 5-day work week has been essentially completed.

Retail trade is continuing to grow and satisfaction of the growing needs of the people for goods and services is improving. Compared with 1975, in 1978 per capita consumption rose as follows: milk and dairy products, from 142.8 to 152.7 liters; eggs, from 146 to 179; meat and meat products, from 58 to 60.7 kilograms. The sale of clothing, shoes, fabrics and, particularly, durable goods, etc., rose.

A real upsurge has been achieved in the creation and mastering of spiritual values.

All of this clearly confirms the beneficial results of the party's central committee line of accelerated development of the national economy and implementation of socioeconomic policy.

The further implementation of the party's policy of raising the population's real income on the basis of upgrading economic effectiveness will be accomplished mainly by raising wages. It is estimated at the present stage that the necessary conditions have been created for raising the minimum wages and the wages of young specialists and for the introduction of a new uniform rate scale and a table of organization in all realms of the national economy.

At the same time, the party's central committee and the government emphasize that as a result of the fast increase in international prices of fuels, energy, and raw materials, outlays for the production of a number of commodities have increased considerably. Because of our extensive participation in the international division of labor, the influence of international prices is already becoming a permanent factor in the development of our economy. Objectively, this calls for wholesale prices to be more consistent with international prices and for intensifying their role in planned economic management. On the basis of the accelerated utilization of the achievements of scientific and technical progress effectiveness and quality must be determined more accurately. A realistic economic assessment of resources and production costs and of competitiveness of our goods on the international marketplace must be carried out.

In order to ensure the further development of the national economy, prices must be used even more effectively in promoting the fast increase in the production of goods in demand and satisfying the needs of the population in accordance with its increased income, the country's resources, and the objectives which we assign ourselves at the stage of building a developed socialist society.

With a view to increasing material incentive in the production of consumer goods and eliminating subsidies, in accordance with improvements in wholesale prices, we must change the retail prices of a number of goods and services.

The required increase in retail prices will not affect the living standard. That is why, along with increased wages, a compensation is achieved by respectively increasing monthly supplements for children, scholarships, pensions, and child-raising aid and letting the state absorb the additional cost of food in health institutions, nurseries and kindergartens, and changes in the upkeep of secondary school and university cafeterias.

The higher wages, restructuring of wholesale and retail prices, and compensation of additional expenditures incurred by the working people are

important economic and political measures. They will contribute to the systematic application of the economic approach and to the even faster growth of the effectiveness of the economy and the systematic upgrading of the living standard of the people.

In order to ensure the implementation of these tasks, the BCP Central Committee and the Council of Ministers of the Bulgarian People's Republic

**Decree:**

1. As of 1 November 1979 a uniform rate scale, uniform salary table, and Directive on Additional Wages will be introduced in all national economic sectors and activities.

In this connection:

a) Wage rates will be increased by an average of about 30 percent which salaries will be raised by about 25 percent;

b) Minimum wages will be raised from 80 to 100 leva monthly;

c) Minimum salaries of young specialists will be raised as follows:

From 105 to 155 leva for higher educations;

From 92 to 135 leva for secondary and semi-high technical and semi-high pedagogical-institute education;

From 83 to 120 leva for secondary education;

d) Salary supplements shall be paid to workers and employees to encourage regular and uninterrupted work within the same enterprise. The amount of the additional payment shall be based on the difficulty and significance of the work. The highest amount will be paid to those employed in underground mining, construction-installation, and geological survey operations: 6 percent per year worked and 36 percent for over 15 years of work; 5 percent for 3 years of work and 20 percent for over 20 years of work in surface mines, construction-installation work, metallurgy, electric power production, cattle, sheep, and hog breeding, weaving and spinning in the textile industry, etc.; 3 percent for 5 years of work and 12 percent for over 20 years to workers employed in the remaining sectors and activities;

e) The system of supplementary wages for work under adverse and other specific labor conditions shall be perfected with a view to encouraging the proper distribution and stabilization of the manpower in sectors and activities with more difficult working conditions. Differentiated additional wages shall be paid as follows: for underground work, no more than 80 leva monthly; for work under other harmful conditions, from 10 to 40 leva monthly;

f) A new system shall be established for the categorizing of economic organizations and their branches with a view to encouraging production

concentration and specialization, raising social labor productivity, production quality, extent of utilization of fixed capital, etc.;

g) More effective wage systems shall be applied in accordance with the type and specific nature of the work with a view to encouraging high effectiveness and production quality;

h) Highly qualified workers, specialists, and management cadres who have made particular contributions to perfecting the socialist organization of labor, applying the achievements of scientific and technical progress, and reaching high economic results shall be encouraged by raising their wage rates for the specific grade to the wage rates of the higher grades in the corresponding profession. The amount of salaries paid employees shall and, in some cases, exceed the salaries for corresponding positions in superior organizations.

In coordination with the Central Council of Bulgarian Trade Unions, by 15 November 1979 the Committee for Labor and Wages shall issue instructions on the procedure, means, and conditions for the application of the uniform rate scale, uniform salary table, and Directive on Supplementary Wages.

2. The general income tax rates shall be amended. The tax free minimum of 80 leva shall be raised to 100 leva and the current tax rates shall not be raised.

3. Monthly supplements for children under 16 shall be increased as follows:

a) Families of working people:

First child--from 5 to 15 leva;  
Second child--from 15 to 25 leva;  
Third child--from 35 to 45 leva;  
For each subsequent child from 5 to 15 leva monthly;

b) Single mothers heads of families:

First child--from 10 to 20 leva;  
Second child--from 15 to 25 leva;  
Third child--from 35 to 45 leva;  
For each subsequent child--from 5 to 15 leva.

The monthly aid per child paid to women whose husbands are doing their mandatory military service and per child of full child of full time students shall be raised from 20 to 30 leva.

Mothers taking unpaid leave for raising a child through the age of three shall be given 10 leva monthly.

4. The amount of all types of scholarships, including those granted foreign students shall be raised by 10 leva monthly.

Students over 16 not receiving scholarships shall be paid 10 leva monthly.

5. The following pensions shall be raised:

- a) To individuals receiving pensions as per the Law on Pensions--by 10 leva monthly;
- b) To individuals receiving pensions as per the Law on the Pensioning of Cooperative Farmers--by 6 leva monthly.

Membership in TKZS [Labor Cooperative Farms] for the time from the founding of the farm to 1 January 1957 shall be considered length of service in accordance with the Law on Pensions for individuals who have worked in a TKZS or have been at its disposal no less than eight months per calendar year.

6. Within the limits of the additional funds allocated by the Ministry of Finance, the executive committees of the okrug people's councils shall increase the monthly amounts of the benefits they grant.

The Ministry of Public Health and Ministry of Finance shall make the proper amendments to the Regulation on Financial Aid and Privileges.

7. The new wholesale prices for industrial goods, transport rates, purchase prices of farm goods, cost of studies, design, and construction projects, and discounts and markups for supply and trade activities shall apply as of 1 January 1980.

8. New retail prices, as stipulated in the appendix, shall apply as of 12 November 1979.

9. In coordination with the State Committee for Planning--Main Administration of Prices--the Committee for the Press shall establish:

- a) As of 1 January 1980, new prices for printed matter, reflecting changes in newsprint prices;
- b) As of 1 December 1979, new prices for notebooks, paper, and others, sold through the commodity fund (with no changes in prices charged for student notebooks and paper);
- c) As of 1 January 1980 the prices shall be set for newspapers, with a basic price of three stotinki for a four-page daily.

10. Ticket prices as of 1 December shall be the following:

Movie theaters, standard screen, first category--from 0.30 to 0.60 leva  
Wide screen movie theaters--from 0.50 to 0.80 leva  
Theaters first category--from 0.60 to 4.00 leva  
Puppet theaters, first category--from 0.20 to 0.80 leva  
Circuses, first category--from 0.40 to 4.00 leva

Entertainment enterprises--from 0.80 to 2.00 leva

Ivan Vazov National Academic Theater--from 0.60 to 6.00 leva

National Academic Theater for Opera and Ballet--from 0.60 to 6.00 leva

Soccer games--from 0.50 to 5.00 leva

Other sports events--from 0.30 to 3.00 leva

11. Rates for metered taxi haulage shall be raised as of 1 January 1980 by 59 percent.

12. Food prices in cafeterias shall reflect only increases in retail prices of food products.

13. The increased costs of the food in health institutions, nurseries, and kindergartens, and the increased expenditures for the upkeep of secondary school, university, and office cafeterias, based on the present decree, shall be assumed by the state budget.

14. Public catering prices shall reflect the new retail prices of the products and increased markups by categories, as follows:

Third category--no more than 10 percent

Second category--no more than 15 percent

First category--no more than 25 percent

For extra, luxury, and other high categories--no less than 20 percent.

15. As of 1 January 1980 prices of housing sold to the population, panel type, shall be raised by 40 percent. The prices of housing built on the basis of other systems shall be increased in accordance with changes in the prices of construction and installation work.

Said increase shall not apply to housing for which Act No 16 had been signed by 31 December 1979 and which had been allocated to the customers. In the case of cooperative housing construction, carried out by a contractor, the increase based on changes in the prices of construction and installation work and retail prices of materials shall apply only to the part to be completed after 12 November 1979, established by inventorying already completed construction.

16. Before 20 November 1979 the chairman of the Committee for Architecture and Public Works and the Minister of Finance shall submit to the Council of Ministers proposals on:

a) Changes in the rate of prices of real estate with a view to making them consistent with the new prices of construction and installation work;

b) The procedure and means for additionally compensating owners of expropriated real estate, who were paid before 12 November 1979 and were scheduled to purchase a housing unit or were members of a house building cooperative.

The appraisal of residential buildings based on the new rate shall be based on the date of the publication of the present decree.

Should a citizen have received the agreement of the respective department or organization, based on a written request for the purchase of housing, before 12 November 1979, and submitted the required documents to the respective people's council, the appraisal of the housing shall be based on the old prices.

17. The maximum amount of loans for the building or purchasing of housing shall be raised from 6,000 to 8,000 leva.

18. In 1980 retail prices of fresh fruits and vegetables and pickled goods sold through the trade network, including sales at cooperative markets, on commission, or by firm stores, shall remain on the level of the respective seasons and periods of 1979.

The executive committees of okrug and obshtina people's councils shall exercise strict control over the observance of said prices.

19. Before 1 December 1979 the Ministry of Internal Trade and Public Services, Central Cooperative Union, Central Council of the National Agro-industrial Union, and State Committee for Planning shall submit a proposal to the Council of Ministers on improving the quality of the bread and bakery goods.

The Ministry of Internal Trade and Public Services and the Central Cooperative Union and the executive committees of okrug people's councils shall take the necessary practical measures to increase the variety of and improve trade in bread and bakery goods.

20. Ceilings on liquid fuels and electric power for residential requirements shall be eliminated.

Before 1 December 1979 the Ministry of Power Supply shall take the readings of electric meters and hot water meters.

The new prices for steam and for hot and drinking water shall apply as of 1 December 1979; for telephone conversations, and telegraph and postal services, as of 1 January 1980.

21. The Ministry of Internal Trade and Public Services, National Agro-industrial Union, and Central Cooperative Union shall organize sales of fodder by the trade network for private animal husbandry.

22. As of 1 December 1979 there shall be a one-time sale of goods reduced by a total of 50 million leva at the expense of the state budget.

23. Before 25 November 1979 the State Committee for Planning and Ministry of Finance shall reflect in their 1979 and 1980 plans and budgets for ministries, other departments, and okrug people's councils the changes in norms, ceilings, and indicators based on the present decree.

The BCP Central Committee and Council of Ministers express the confidence that the working people in our country will accept the measures and long-term intent of the present decree in the proper way and will dedicate even greater efforts to improve the socialist organization of labor, the rapid utilization of scientific and technical accomplishments, the implementation of a strict savings regimen, upgrading effectiveness and quality, and implementing the line of upgrading the living standard of the people and ensuring the further upsurge of our homeland--the Bulgarian People's Republic.

First Secretary of the BCP Central Committee: T. Zhivkov.

Chairman of the Council of Ministers: St. Todorov.

Appendix to Item 8

Retail Prices

	Measure	Retail Price
Sofiyski bread--standard	kg	0.26 leva
Dobrudzha bread	"	0.36 "
Stara Zagora bread	"	0.48 "
Wheat flour, type 500	"	0.60 "
Fodder for the commodity stock	"	0.30 "
Bran	"	0.25 "
Fresh cow milk butter, 3 percent fat content	liter	0.36 "
Cow milk yogurt	kg	0.46 "
Cow milk cheese	"	2.60 "
Goat cheese	"	3.60 "
Vitosha kashkaval cheese	"	4.00 "
Balkanski kashkaval cheese	"	5.40 "
Cow milk butter	"	5.40 "
Crystal sugar	"	1.00 "
Rice	"	1.00 "
Navy beans	"	0.80 "
Refined sunflower seed oil	liter	1.50 "
Spaghetti, vermicelli, and noodles with eggs	kg	0.82 "
Poultry meat	"	2.40 "
Pork with bones	"	3.40 "
Beef with bones	"	3.40 "
Veal with bones	"	5.40 "
Lamb	"	6.40 "
Hot dogs	"	3.60 "
Servilat salami	"	6.50 "

	Measure	Retail Prices
Musala salami	kg	8.40 leva
Canned vegetables:		
Sterilized green peas	Jar 0.8	0.60 "
" green beans	"	0.54 "
" unpeeled tomatoes in cans	Can 0.8	0.58 "
" mixed vegetables	Jar 0.8	0.65 "
" pickles [t.o.]	"	0.74 "
Stewed fruit, jams, preserves:		
Stewed, unpeeled peaches	Jar 0.7	0.63 "
" quince	Jar 0.8	0.68 "
Peach preserves	Jar 4A	0.63 "
Wild rose jam	"	0.77 "
Apple jam	"	0.56 "
Sweetened peach juice	Jar 0.5	0.40 "
" quince juice	"	0.40 "
Lemonade	bottle 0.250 liters	0.08 "
Orangeade	" " "	0.15 "
Coca cola	" 0.200 "	0.20 "
Carbonated mineral water (Sofia)	" 0.250 "	0.05 "
White and red table wine, ordinary	liter	1.20 "
Gumza wine	0.7 "	1.50 "
Dimyat wine	bottle 0.7 liters	1.60 "
Zagore wine	" " "	1.70 "
Misket wine	" " "	1.80 "
Karlovski Misket wine	" " "	2.20 "
Mavrud wine	" " "	2.20 "
Manastirsko Shushukane wine	" " "	2.80 "
Tamyanka wine	" " "	3.00 "
Beer, ordinary	" 0.5 "	0.32 "
Beer 12° special (Shumensko, Zagorka, etc)	" " "	0.40 "
Brandies		
Fruit 36°	"	4.00 "
Grape 40°	"	5.40 "
Plum 38°	"	7.00 "
Anise-flavor 47°	"	7.00 "
Special (Troyanska, etc.)	" 0.7 "	8.00 "
Vodka, Stolichnaya	" 0.5 "	5.00 "
Sheeting	square meters	2.00 "
Towels	" "	6.40 "
Children's knitted cotton goods	average increase by	20%
Children's shoes under No 23	" " "	30%
Construction materials:		
Bricks, piece	1,000	98.00 "
Flat tiles	piece	0.20 "
Construction iron	kg	0.60 "
Boards--coniferous	cubic meters, average price	165.00 "

	Measure	Retail Price
Deciduous	cubic meters	
	average price	140.00 leva
Joists--coniferous	" " " "	145.00 "
Deciduous , cubic meters	" " " "	90.00 "
Pressed wood tiles, cubic meters	" " " "	185.00 "
Electric Power		
Day	10 kw hours	0.32 "
Night	" " "	0.10 "
Steam for heating	g.c.	10.00 "
Heating furnace oil	liter	0.24 "
Brown coal	ton	23.00 "
Briquettes (local)	"	30.00 "
Propane-butane gas	10 liters	3.00 "
Telephone conversation, 3 minutes or less		0.02 "
Telegram	20 words (over 20 words 0.02 leva per word)	0.50 "
Tax stamp for regular letter		0.05 leva

5003  
CSO: 2200

PREPARATORY WORK ON 1980 OPERATIONAL PLAN

PRAVDA Commentary

Bratislava PRAVDA in Slovak 10 Oct 79 p 1

[Excerpt] When recently F Martinka, SSR deputy premier and minister-chairman of the Slovak Planning Commission, received a group of the central press, radio and television editors in connection with preparatory work on the 1980 operational plan, among other things he said: "Speaking about work, the first task concerns the expected fulfillment of this year's plan. Here belongs, first of all, a correct estimate of the rate of eliminating shortfalls in plan fulfillment from the beginning of the year in industry, construction and rail transportation. Let us not be deceived by timely plan fulfillment which may have been distorted in some sectors by unbalanced chronological apportioning of the plan. An equally complicated task is a qualified estimate of the consequences of this year's lower harvest yield and yearly cattle production tendencies for the year 1979-1980. When considering the overall basis, it is not just accuracy or exact calculation which counts. It is much more: it is a thorough analysis which must reveal development tendencies, main reasons for linking different phenomena, extent of use and utilization possibilities of resources and reserves. Only such an evaluated and perceived basis can be a reliable foundation for further deliberations and practical solutions in future development." The SSR Government recently discussed 1980 plan drafts submitted by individual ministries and regional national committees. Prior to this, the Slovak Planning Commission also evaluated drafts submitted by individual production units [VHJ] and came to the conclusion that the ministries have only slightly rectified the VHJ drafts which differ substantially from the approved directives. Example: for 1980 the ministries and regional national committees propose a lower creation of material resources by approximately Kcs 7 billion. At the same time, however, for this lower level of development they request increases in imports of raw materials and other materials as well as in wages and investment funds. These proposals are unacceptable because they would add to the imbalance between resources and requirements as well as domestic market development and they would also negatively influence our foreign trade and capital investment. In other words: these proposals inadequately foresee a better utilization of possibilities and reserves of the whole economic potential. They are not thoroughly based on resolutions adopted by the CPCZ

Central Committee and the CPSL Central Committee; they contain no ambitious aims to create resources but a large measure of demands. Thus, they persist in all the inert tendencies but fail to focus on needs of the future--the Seventh Five-Year Plan. The draft of the plan to be submitted for discussion and approval to the CPCZ Central Committee must solve the key problems. At the same time it must include outlines for optimal and realistic ways for effective future development. And so, we are now in the last quarter of this year and also in the final phase of preparatory work on the profile of the future--the Seventh Five-Year Plan. The starting point for the future is always at the present time. Now too. And this is exactly what we should be aware of in its full extent and complexity. And not just be aware....

#### Martinka Evaluation

Bratislava PRAVDA in Slovak 25 Oct 79 p 2

[Text] The national economy is a living and at the same time very complicated mechanism with permanently changing structure and a number of production-economic relations. It is also a very sensitive mechanism influenced by many circumstances which are both of foreign-economic as well as domestic nature, but mostly by the changing effectiveness of the population's work.

In these years, our economy is also being influenced by a number of factors, tendencies and, above all, by developments in world economy because more than a third of our national revenue comes from foreign trade. The source of this influence is not so much in consumption possibilities limited by economic crises in the non-socialist world (although they must not be underestimated), but mainly in distinct changes in price relations between raw materials, other materials and foodstuffs, on the one hand, and manufactured products, on the other. In our situation, all this is aggravated by our trade structure, especially because the volume of our raw material and material imports is high.

Consequences of repeatedly bad climatic conditions was another factor which influenced agriculture and caused shortfalls in planting production development with the exception of grain. During the first 3 years, in Slovakia this sector (less food industry) fell short of the plan by more than Kcs 5 billion.

This year the development was influenced mainly by two occurrences: Climatic conditions adversely affected even the grain growing (production fell 18 percent short of the plan) and continual and proportional industrial development was affected by fuel energy shortfalls at the beginning of the year. Production shortfalls in January (amounting to Kcs 2 billion) affected supplier-customer relations throughout the year.

It was exactly these--let's say--objective reasons which revealed the naked truth about the quality of managerial work, its inadequate adaptability and inability to overcome problems. They revealed the quality of managerial work at all levels being not up to the standard required for the new

challenging development and that some hard and critical thinking was necessary at every place of work. Life demands that traditional worn out methods as well as archaic evaluation methods be abandoned.

How does economic thinking and acting react to these new circumstances and accompanying problems and difficulties? Like life itself, in various ways. Depending on character of approach--not without a certain degree of schematism to be sure--we can talk about several groups: In the first group are enterprises successful not only in attempts removing quantitative production delays, but which also fulfill all the quantitative requirements essential for fulfilling the plan (supplies for export, domestic market, development, production economy, etc.). After 8 months, we already have 92 such enterprises, i.e., 40 percent of all the centrally managed enterprises.

Enterprises of the second group are also striving to fulfill tasks assigned to them, even if their methods for removing production delays are not up-to-date in the new circumstances. To improve the situation they mostly use extending methods such as overtime, special work shifts, work during holidays, etc., i.e., they are extending their working time fund. This sacrifice and enthusiasm is appreciated, but the only reliable future way is more rational utilization of normal working time.

There are also, however, attempts to choose "the easy way"--some enterprises are making unplanned demands on social resources, mainly on imports, work force, investments, or they request reduction of their planned assignments. These attempts can also be found in drafts for 1980 economic field plans. Enterprises, economic ministries and economic production units which are administered by the SSR Government proposed a reduction in creation of material resources (by Kcs 3.2 billion) compared with the approved directives, but at the same time they requested increases of Kcs 0.6 billion in the way fund and Kcs 3 billion in investment. Compared with the approved directives this is a Kcs 12.4 billion decline.

The most extreme views are those which reflect lack of understanding of the new circumstances as well as inability to find a solution at one's own place of work. Thus, instead of objective and rational evaluation of the situation based on identification of concrete reasons for certain phenomena and tendencies, instead of creative search for methods to increase effectiveness of one's own work, we get only criticism of the situation, shifting responsibility on to someone else, usually the currently very popular shifting of responsibility way up on to the highest possible authority which is causing unnecessary nervousness, discontent and a kind of frustration. In some cases, these so called methods lead to general criticism of the plan (mostly criticism of the state plan, not of economic plans at individual management levels), as if the plan were an undesirable obstacle for some people.

It is exactly this general criticism which breeds views that there are no ways out of complicated economic situation or that we do not know that.

We must categorically point out that there is no ground for such views. Results and possibilities of our economy have no room for defeatism and frustration. This can be substantiated by recalling a few facts--to avoid not seeing the woods (positive results) because of the trees (problems):

First: In spite of all the influences, difficulties and problems, our economy as well as the whole socialist society is experiencing dynamic development. We may point out that during the first 4 years of the current five-year plan, material resources have been rapidly growing. Thus for instance, in Slovakia the national product has grown by approximately 5 percent a year, mainly because of even faster growing industrial production (6.1 percent). And, finally, even in this difficult year of the current five-year plan, we will attain not only a rapid production growth in utilization of produced resources, partly in capital investment but mainly in living standard. Results so far achieved indicate that, compared with last year, the monetary income of the population will grow by Kcs 4.7 billion, including Kcs 3 billion from work in the economic field and Kcs 1.2 billion from the social field. Purchases on the domestic market will grow by Kcs 2.75 billion, the volume of bought services will increase by Kcs 1 billion and, on top of this, savings will also grow by Kcs 3 billion. Social expenditure--outlay connected with education, culture, health, etc, will continue to grow even more rapidly this year, i.e., by 7.5 percent. And 44,550 new apartments will be made available.

Second: We must realize that in Slovakia we already have a sizeable economic potential at our disposal but, at the same time, we also have large reserves in its utilization. Mobilizing these reserves will enable us to find the speediest, most effective and thus also cheapest way to create even more abundant resources. After all, we own some Kcs 580 billion worth of basic resources including Kcs 209 billion in industry where most of them are new. There are more than 2.34 million workers employed in national economy of whom 430,000 have university education and 1.4 million high school education. We are also aware that we have still more reserves in timely utilization of machinery and equipment, in worktime utilization through internal work shifts, in organizational work, etc.

Third: It is exactly at this time that more than ever we must not only realize but also effectively utilize methods of progressive development, mainly in two progressive sources of effectiveness: results available through scientific-technological development both domestic and foreign (license purchasing, know-how about progressive equipment and machinery), better incorporation of our economy into international work distribution, into cooperation as well as specialization and joint activities of socialist economic integration.

In order to achieve this better effectiveness of our work, to multiply creation of resources for the benefit and happier life of our people, there is only one instrument to realize this economic policy: planned management of the national economy and state development plan.

Any plan, of course, will bring with it a certain "freedom limitation" of actions in economic management as well as submission to society's interests, economy development and current social program.

Viewing the plan objectives offers a lesson derived from two facts from our past experience. Let us recall that it was exactly the plan which molded the policy and strategy of the new CPC SSR leadership, and it was indeed the plan which facilitated the rapid and effective exit of our national economy from the critical period in the late sixties. The second fact is that this period once again offered us a deep insight into the experience of Soviet planners and enabled us to draw a lesson as to how qualitative developmental conditions can increase and strengthen the role of the plan in directing economic progress.

Therefore, we must now bear in mind so much more certain basic postulates regarding planned management, the irreplaceable role of the plan, especially in utilizing advantages of the socialist social system, ensuring a smoothly running proportional and progressive national economy development.

A planned management system is the result of socialism and, at the same time, a demonstration of its advantages. It comprises and expresses the interests of society, collective as well as individual. The interest of society as a whole is no doubt realized through actions of all the economic subjects but it is not realized in the same way at society, enterprise and individual levels.

Economic policy cannot remove objective differences by the plan, but it does create a base on which realization of individual and collective interests are organically merged with the interest of society as a whole.

In this connection another principle of socialist planning must be inevitably mentioned: the principle of democratic centralism. According to V.I. Lenin, this principle is concretely manifested by preparation and realization of uniform economic policy, by the leading role of the party in directing social production, by preparing an all-state economic plan, by strictly enforcing planned conditions and work discipline, by active participation of workers in management and by increased responsibility and authority for local organs of power.

This role can naturally be played only by a superior plan, superior in its content, aims in overall economic mechanisms and realization instruments. And this is why, in accord with the resolutions adopted by the 15th CPCZ Congress, we must strive more effectively and emphatically for its continual improvement, on the one hand, and on the other hand, to fight every day for realization of the economic and social program approved by the 15th CPCZ Congress for the Sixth Five-Year Plan period, by a more intensive, uncompromising and more effective work at every place of work.

Wide experience in socialist development especially in the Soviet Union vividly show that in our socialist social system it is possible to find solutions for even the most complicated economic and other situations and to move systematically and rapidly forward.

To that end, it is also necessary at this time in our country to unite the party, state and social and economic programs and organizations on the basis of the plan in one direction: to look in a creative way for concrete methods for its realization.

There is no other way than striving at every place of work to discover hidden reserves and possibilities, activate them and utilize our whole mighty potential. It is not possible to follow the way of demands and additional investments in new stages of the production process. They are more and more difficult to obtain and can be secured for further development only by the increased effectiveness of everybody's daily work.

There is no other way than to win the broad working masses over for realization of the plan, to engage them in its formation and, above all, to convince them to make the planned aims a reality. This is why it is necessary to mobilize socialist work brigades, rationalization brigades of innovators and all workers to discover and utilize reserves for the best possible plan fulfillment at every place of work.

Only brave work and its growing effectiveness will make it possible to fulfill both parts of the party's program--creation of resources, and increased living standard as well as improved life security for our people.

9454

CSO: 2400

DEVELOPMENT, USE OF COMPUTERS SUMMARIZED

Prague SVET HOSPODARSTVI in Czech 5 Oct 79 pp 1, 2

[Article by Antonin Barasek, Czech Statistical Office: "Use of Computer Technology"]

[Text] The development of computer technology in 1979 based on the Sixth Five-Year Plan directives continues to be oriented by producers, operators and users toward JSEP [uniform system of electronic computers] of the socialist countries. Thus, in accordance with conclusions of the 15th CPCZ Congress preconditions are being created to consolidate automated control systems into a uniform system of collection, elaboration and storage of information.

Situation and Deliveries of Computers

We divide automatic computers into several groups. By the end of 1978, records were kept in the CSR on 913 digital computers with an internal memory capacity over and above 128 Kbits, 153 calculating punches, 89 control computers, 4 hybrid computers, 196 analog computers, and 321 minicomputers. In 1978 these computers were used within the framework of the national economy for the collective elaboration of data, control of technological processes, elaboration of scientific-technological calculations and simulation of processes in science, medicine, and technology.

The share of uniform system computers in the overall number of digital computers already amounted to 28.4 percent as of 31 December 1978. The total number of individual computer types of the JSEP line as of 31 December 1978 increased as follows: the EC 1010 to 27 units; the EC 1021 to 129 units; EC 1030 to 48 units; EC 1033 to 25 units; EC 1040 to 27 units; and other types to 3 units. By the end of 1978 there were altogether 259 JSEP computers recorded in the CSR and the increment during 1978 amounted to 50 units.

Of the total number of 1,455 computers in the CSR, 396, or 27.2 percent, are worn out and obsolete; 298 computers, or 20.5 percent, are obsolete. Included in the worn out category are computers over 8 years old; in the obsolete category (from the viewpoint of technological development in computer technology) are computers over 5 years old. The average age of all computers in the CSR is 5.9 years.

#### Age Structure of Computers in the CSSR

The average age of computers is influenced to a considerable extent by the fact that there are still computers in operation whose production was stopped in previous years because their technical parameters were surpassed by the development and production of new types of computers. Calculating punches may be cited as an example where out of the total number of 153 units, 129 units or 84.3 percent are more than 5 years old. Quite the opposite situation is true in the group of control computers whose use in the control of technological processes has been realized to a predominant extent during the last 5 years. Here, out of the total number of 89 computers, 17 computers are over 5 years old--19.1 percent.

The average age of the digital computers is 5.1 years. For statistical purposes this group may be divided into small, medium I, medium II, and large according to the capacity of the computer's internal memory. In the past computers of medium II and large groups, which could insure higher demands upon information necessary for improved management of the national economy, were utilized. This is documented by the fact that in the large digital computer group, out of the total number of 177 units, 32 units, 22.1 percent, are older than 5 years. The average age of the computers in this group is 3.9 years. On the other hand, in the small digital computer group are computers still in operation which are for the most part worn out and obsolete (of the total number of 153 units 75 units, that is, 49.0 percent are more than 5 years old. This may be explained by the overall trend in the development of digital computers when at the present time--precisely because of needs of the national economy--computers of high parameters are inevitable. Without such means of computer technology it is impossible today to imagine solution of the data-based systems and large automated control systems.

#### Machinery and Equipment for the Collection and Preparatory Elaboration of Data

In order to elaborate information on computers it is necessary to prepare data on suitable media. Among the media which have now become classical are punch cards and punch tapes. The development of computer technology and the ever-growing demands upon quantity of information required new progressive solutions. We may include among them, for example, the recording of data on magnetic tape and disk, optical scanning of primary documents, and the like. In this area development has reached considerable progress and there is now much modern equipment for the collection and preparatory elaboration of data. The operational application of this equipment, however, is limited by possibilities of delivery and therefore collection of data by the classical method is still predominant.

The total amount of machinery and equipment for data collection in the CSR as of 31 December 1978 was 15,212 units (in organs under the CSR Government jurisdiction, 8,551 units).

Classical technology continues to predominate in such machinery and equipment, that is, machinery for the production of punch cards and punched tapes which represent 80.9 percent of the total machinery. The quantity of modern, progressive machinery and equipment for collection and preparatory elaboration of data amounted to 591 units as of 31 December 1978. Included in this figure is equipment which has the greatest frequency of application, as follows: single key-strip recording devices (one key strip for recording on magnetic medium is connected directly to central unit), 291 units; multikey-strip recording devices (more key strips may be connected to the central unit through which it is possible to simultaneously record data on the magnetic medium), 106 units; and reading equipment (optical scanning of primary data), 145 units.

The use of classical machinery to procure data makes up an average 79 percent of the capacity of a single-shift operation; the use of key strips which are connected to the central systems for collecting and preprocessing data amounts to 81 percent of the capacity of a single-shift operation. Achieving greater use of this equipment is connected with the existing shortage of operators. In the CSR there are 8,362 operators for the 15,212 units of machinery and equipment for collecting and preprocessing data.

The application of modern technology to collect and preprocess data and also the renovation of this technology is slower than the application of new computer systems. The value of machinery and equipment for collecting and preprocessing data (in purchase costs) increased 21 percent while the value of computer systems increased 24.5 percent.

#### Time Utilization of Computers

In 1978, computers in the CSR were used an average of 3,816 hours (that is, 91.7 percent of the time capacity of a two-shift operation). For productive work they were used on an average of 2,861 hours (that is, 75 percent of the capacity of a two-shift operation).

The greatest use of computers is achieved by universal computer centers (centers which, for compensation, carry out computer work for organizations). We may cite as an example Podnik Vypocetni Techniky [Computer Technology Enterprise] which is achieving 5,582 hours a year with computers. For example, computers are being utilized in departmental computer centers as follows: CSR Ministry of Trade, 5,674 hours; CSR Ministry of Building, 4,074 hours; and CSR Ministry of Agriculture and Food, 4,391 hours.

The least use of computers is made in the enterprise computer centers (average use amounts to 3,280 hours) and in the school computer centers (average use amounts to 2,897 hours).

The use of computers in individual types of computer centers did not deviate from a long-term tendency, and to a certain extent in dependent upon the mission of individual types of computer centers. However, greater use of computer technology means should be achieved in the enterprise computer centers.

#### Personnel Insuring Operation of Computer Technological Equipment

The development of computer technological equipment also places constantly growing demands upon the workers who insure the operation of this equipment throughout the national economy. For example, this is no longer just a matter of processing data or constructing large control systems. In connection with demands upon the quantity and quality of information it is necessary to be aware of the complexity of the means of computer technology upon which there are demanding requirements. Moreover, in connection with personnel who insure the operation of computer devices, it is necessary to be aware of the fact that this is an area which is continuously developing and that this development is applied in practice relatively fast. To cover requirements for the information which is necessary in the process of managing the national economy requires not only a continuously greater use of the technological equipment already applied but also its quantitative growth which, of course, will also manifest itself in the growing number of workers necessary.

The number of workers in computer technology in the CSR increased in 1978 over 1977 by 1,753 workers (that is, by 4.4 percent). In this connection, it must be stated that a rather great fluctuation in the area of computer technology continues to persist (increase in the CSR in 1978 amounted to 26.8 percent and a decrease to 22.4 percent). The greatest fluctuation is the category of operators.

The qualification structure according to the level of education achieved is becoming higher. In 1972, the percentage of university graduates was 11.4 percent; as of 31 December 1977, 19.8 percent; and, as of 31 December 1978, 20.9 percent. The percentage of workers with a high school education rose from 36.5 percent in 1972 to 42.4 percent as of 31 December 1978.

Good results were achieved in 1978 in the development of computer technology especially in increasing the number of JSEP computers and other modern progressive means of computer technology and in their greater utilization for work connected with the creation of automated control systems and automated information systems.

Reserves still exist as to the time utilization of computers, in the effective replacement of machinery and equipment for procuring and collecting data by modern means of collecting and preprocessing data; still unsatisfactory from the viewpoint of time is putting computers into operation and still persisting is the great fluctuation of workers in the area of computer technology

It is obvious that further substantial improvement in computer technology may be achieved only by concrete application of 15th CPCZ Congress resolutions and by utilizing existing reserves.

CZECHOSLOVAKIA

THE PRESENT AND FUTURE OF RAILROADS EVALUATED

Prague TVORBA in Czech 26 Sep 79 pp 3,5

[Interview with Valdimir Blazek, CSSR Minister of Transportation, by Vaclav Snydr: "The Present and Future of Railroad Transportation"]

[Text] In connection with the approaching "Day of Railroad Workers" we asked comrade Blazek several questions.

[Question] What are the most important tasks, the greatest problems and prospects of Czechoslovak railroad transportation? How does the fulfillment of these tasks affect the work conditions of railroad workers and passenger comfort?

[Answer] The program of development of the Czechoslovak national economy, approved by the 15th CPCZ Congress, specified also the tasks of individual transportation branches for the period of the Sixth Five-Year Plan. They are more demanding than the successfully fulfilled tasks of the Fifth Five-Year Plan, their volumes increase faster than technical facilities in the transportation sector and railroad transportation in particular.

The traffic volume of railroad transportation depends primarily on the technical and technological capacity of railway lines and marshalling yards, on the number and qualification of workers, on the information system and quality of management decisions.

The demanding nature of tasks, laid down in the Guidelines for Economic and Social Development of the CSSR during the 1976-1980 period which were approved by the 15th CPCZ Congress, determines the goals and basic developmental directions of railroad transportation for individual periods. Among them the following must be mentioned in the first place:

--a 13 percent increase in freight transportation, while fully insuring transportation of solid fuels and raw materials;

--orientation of investment innovations to further increase in the capacity of key railway lines and stations;

--comprehensive reconstruction of tracks in the average length of 750 kilometers annually;

--improving the quality of interstate transportation;

--expediting the electrification of lines with both current systems;

--increasing operation safety by installing additional communication, safety and sorting equipment, particularly automatic block-signal system with the line train retarder and relay safety equipment at railroad stations;

--development of traction vehicles and replenishment of the rolling stock with modern electric and diesel locomotives;

--replenishment of the passenger rolling stock with modern four-axle cars and diesel-electric trains;

--replenishment of the freight rolling stock with predominantly four-axle cars.

The foremost task of railroad transportation during the present and forthcoming period is providing adequate transportation service.

The problems related to this demanding program can be summarized as follows:

--increasing the capacities of railway lines falling in the first and second category, particularly leading to the area of the North Bohemian brown coal basin and those involved in the transportation of solid fuels;

--insuring transit transportation, particularly at railroad stations located on the border with the GDR, Hungarian People's Republic and the USSR;

--coping with the increased loading rate by the rolling stock consisting mainly of box cars and special cars until the end of 1979, when the deliveries of freight cars are to be increased.

In order to fulfill the demanding tasks of railroad transportation, additional reserves are being sought particularly in the more effective application of scientific-technological progress.

In accordance with the technical conceptions of individual types of transportation up to 1990 and on the basis of the analysis of the present situation and needs of railroads, the fulfillment of tasks of scientific and technological development is focused on the solution of the following problems:

--increasing the capacity of key railway lines, railroad junctions and border crossing stations;

--labor shortage in the most important operating jobs;

- technical condition of the means of transportation and equipment;
- improving management in everyday operations and control;
- the quality level of passenger transportation;
- construction of automated systems and application of computers in the management of the transportation process.

In addition to these tasks, there are many problems in the area of coordinated development of combined transportation, optimization of marshalling of trains for both intrastate and interstate traffic, rationalization of the transportation process, development of container systems in relation to the CEMA member states, solution of transportation difficulties in the metropolitan centers particularly Prague, Bratislava, Ostrava, Brno, north Bohemian and east Slovak areas.

The fulfillment of tasks of railroad freight transportation in regard to achieving and surpassing the planned traffic volume has experienced, particularly during certain periods, serious breakdowns in the CSD [Czechoslovak State Railways] network which have been to a considerable extent reflected in passenger transportation, affecting its regularity and on time operations. Several reasons may be mentioned for the fact that the quality of passenger transportation, despite some local improvements in certain areas, has not yet reached the level which would correspond to the present stage of development of technology and national economy as well as to the increasing demands of our citizens.

[Question] What should be done to expedite the solution of the existing problems? What can be achieved in this area through initiative and increased responsibility of individuals?

[Answer] The analyses and checks on this area reveal a number of shortcomings and defects. This is particularly true of some harmful habits in the area of work technology, slow application of technical innovations in both stationary and mobile equipment (due to the limited funds), shortcomings in repair shops stemming from the limited capacities and limited supply of spare parts. Above all, the lower levels of management (railroad stations, railroad cars depots, operating departments, CSD plants--department of dining and sleeping cars) have not yet managed to carry out systematic and effective checks on the fulfillment of measures adopted and to properly stimulate greater initiative of workers.

Due to many years' inadequate attention to the area of passenger transportation, the fundamental duties related to insuring quality of this type of transportation enter the consciousness of workers slowly. In the effort to stimulate the initiative of workers in eliminating the existing shortcomings and unhealthy relations, the railroads have announced--for the time being as an internal measure only--for example the year of quality of passenger transportation, the month of quality of passenger transportation. This resulted

in a new approach of most workers at least in the operating units to the fulfillment of tasks in passenger transportation. We intended also to insure the participation of larger segments of workers in railroad transportation and other sectors in the solution of problems related to further development of railroad passenger transportation. We also laid greater emphasis on passengers' cooperation. In cooperation with ROH [Revolutionary Trade Union Movement] and SSM [Soccialist Union of Youth], the railroads are now promoting further expansion of socialist competition--through local contests, competitions for the title of brigade of socialist labor, the guards of passenger comfort organized by the SSM "Reflector of Young People." Past experience has revealed that these forms of competition have not yet attained the required level everywhere. It is therefore imperative to make continued use of workers' initiative and to direct it to uncovering and elimination of all shortcomings which adversely affect passengers' comfort and quality of services offered by the railroads.

Despite these shortcomings, however, some positive results have been achieved. They are apparent particularly in the better appearance, facilities and lighting of dispatchers' buildings of railroad stations, railways stops and in the modernization of hygienic facilities in these buildings. Due to the existing labor shortage, neatness of these facilities is largely maintained by the various forms of socialist competition and pledges by the workers at the railroad stations. A more rapid implementation--particularly of construction projects designed to increase passengers' comfort--is hindered, however, by the limited capacity of railroad construction organizations. It happens also that the installed facilities have a short service life because they are damaged or destroyed by the irresponsible passengers and visitors to the railroad station areas.

The quality of railroad passenger transportation has been lowered also by the shortcomings reflected in bad technical condition of railroad passenger cars. Although the railroad rolling stock was replenished with 339 new cars in 1978, on the average 220 cars were permanently out of service because of repairs and shortage of spare parts. The repair rate of special (sleeping, dining) passenger cars is substantially higher and has been reflected in justified criticism and complaints by passengers about the level of services offered, when their car was taken out of service or replaced by another car of a different series during the journey. These are the things which considerably depreciate the travel standard particularly in international traffic.

To improve the quality of passenger transportation in mobile equipment, a system of model trains is employed on all lines, while the method of exchange system of railroad cars is practiced on a lesser scale. These methods of passenger cars handling can be used all the time except the winter period because the workshops are not adequately equipped for work in winter and the water distribution systems are drained and shut off. Cars are then washed on the minimum possible scale which, naturally, makes the cars look even worse and substantially affects the overall impression of transportation.

[Question] Can you be more specific about the level of working environment of railroad workers in view of the rising demands for transportation of materials and economic equipment? What results have been achieved in this respect?

[Answer] In creating favorable conditions for work, primary attention is paid to the systematic and planned improvement of the working environment, construction of health care facilities and particularly to cloakrooms, wash-rooms, laundries, dormitories and preschool institutions.

The effect of the measures constituting a comprehensive program of care for the workers will become apparent during the Seventh Five-Year Plan, when the construction will be gradually completed of a network of food producing centers with the emphasis on the food delivery to remote and separated places of work.

Part of the improvement of living conditions of workers also is housing construction which--together with the attention paid to the accommodation of workers away from their permanent residence, to the working mothers, construction of preschool establishments for children and implementation of the resolution of the presidium of the CSSR government on restricting the labor turnover, increased hiring of workers and stabilization of labor force in railroad transportation--creates a complex of measures included in the comprehensive program of care for workers.

[Question] We used to see before the properly functioning cultural centers at many of the bigger railroad stations, there were efforts to take better care of the mother and child. Why these facilities contributing to passenger comfort have been discontinued in quite a few instances?

[Answer] There is no question that the praiseworthy effort of cultural centers has been said that it stagnates particularly in the area of political education and adult education, in exerting influence on thinking, action and behavior of passengers including the popularization of socialist railroad transportation and improvement of passenger transportation in general. To rectify the present situation, measures have been adopted which aim at a critical review of past activity of these centers and the restoration of the original content of their work. The possibilities are being explored of establishing additional cultural centers at the railroad stations, where favorable conditions exist for it.

The federal Ministry of Transportation laid down specific forms and work content of cultural centers. If these facilities are to successfully discharge their mission, they must be backed up by systematic work of local program councils. Their work must support the activity of the cultural center in specific instances and promote its maximum cooperation with the representatives of mass organizations, special-purpose organizations, with the representatives of local public and cultural institutions. Last but not least, the workers at the cultural centers must have high cultural, educational and professional standards.

The increase in the quality of passenger transportation depends also upon the selection of other workers whose critical shortage exists. For this reason, the railroads encounter difficulties in expanding various services to the travelling public--daytime nurseries, porters and so on.

At the present time, we are dealing with an important problem--the deteriorating conditions for adequate energy supply to our national economy. For this reason, we analyzed in detail the resolution of the government presidium on the preparation of a draft proposal for the long-term program of rationalization of consumption, savings and utilization of all types of fuels and energy.

In comparison with other types of transportation at comparable speeds, railroad transportation consumes the least amount of energy per unit of transportation service. With the smallest energy consumption, it can perform large-scale service in passenger and freight transportation. It therefore deserves that appropriate attention be paid to it now and also in the future. This will result in the reappraisal and reformulation of technical conceptions of the development of railroad transportation and specification of new criteria for its further, systematic, planned development.

8973

CSO: 2400

MINISTER LER ON NEW AGRICULTURAL PRICES, SUBSIDIES, TAXES

Prague ZEMEDELSKE NOVINY in Czech 26 Oct 79, pp 1,2

[Excerpts from Minister Ler's statement in the Federal Assembly: "Making Better Use of Domestic Resources"]

[Text] A review of the first 3 years of the Sixth Five-Year Plan confirms that despite some unfavorable conditions the overall volume of agricultural production increased 7.5 percent during this period. In comparison with the previous five-year plan, the shipments from the food industry to domestic trade increased almost 17 percent.

Despite these positive results in the development of agriculture, however, the targets of the Sixth Five-Year Plan are not completely met. A balance between crop and livestock production has not been achieved. Despite a generally favorable trend in animal production, the breeding of cattle and beef production lag and the resulting deficit is made up for particularly by the increased production of hogs and poultry for slaughter which, however, requires large quantities of grain fodder.

The trend in overall efficiency of agricultural production is not satisfactory either: the state plan for profit fell short of the target by more than Kcs 11 billion during the past 3 years of this five-year plan, and additional loss amounting to almost Kcs 4 billion is anticipated for this year. This considerably affects the profitability level which likewise lags behind the plan.

Apart from the objective causes of this unfavorable development, particularly weather conditions, we must not overlook certain subjective factors such as efficiency of some intensification investments, utilization of existing reserves, shortcomings in management and so on.

The 13th plenum of the CPCZ Central Committee therefore laid down the principal directions of improvement and modification of economic tools:

--to reduce the differences in the profitability of individual agricultural products mainly by increasing the profitability of cattle breeding and thus stimulating the enterprises' interest in its expansion;

- to lay more emphasis on the higher quality of agricultural products from the standpoint of their final use and to intensify the differentiation of purchase prices for this purpose;
- to achieve greater interarea and interenterprise equalization of incomes of agricultural enterprises particularly by using the tools affecting the differential rent;
- to put on a uniform basis the remuneration of live labor in the cooperative and state sector of agriculture and thus to eliminate the differences in expressing the costs of reproduction of human labor;
- to work toward a more economical use of the means of production and gradual reduction of consumption of grain fodder, and
- to strengthen the khozraschet system on the state farms.

In accordance with these objectives, modifications will be carried out in the following four areas effective 1 January 1980: purchase prices of agricultural products; purchase prices of fodders and fertilizers; unification of remuneration of live labor between the state and cooperative sector and agricultural tax.

The purchase prices of agricultural products are increased by a total of Kcs 4.8 billion with the biggest increase in the purchase price of cattle amounting to Kcs 3.8 billion annually. The increase in the price subsidies for the products of cattle breeding by more than 16 percent will not only favorably affect the present income situation of agricultural organizations, but is bound, in the first place, to create more favorable conditions for an accelerated expansion of cattle breeding which offers the biggest reserves of intensification of agricultural production.

On the other hand, there will be an increase in the purchase prices of fodders and industrial fertilizers. Despite this increase, the prices of these compounds will continue to be subsidized from the state budget by a total of Kcs 2.2 billion. The sales prices of industrial fertilizers are increased on the average by 15 percent, that is, Kcs 800 million. Despite this increase, the prices of fertilizers will be subsidized from all-society resources by Kcs 1.1 billion.

The impact of these modifications is fully compensated by the increases in purchase prices and price surcharges on agricultural products.

In order to put on a uniform basis the remuneration of live labor in the state and cooperative sector of agriculture, an increase is anticipated in the contribution to the partial reimbursement of social security costs in the amount of approximately Kcs 1.5 billion. This contribution will continue to be paid by JZD [unified agricultural cooperatives] and its amount will essentially correspond to the wage tax. This measure will

eliminate the remaining differences in determining the basis of retirement benefits for cooperative farmers. A specific proposal for this adjustment will be submitted by the CSSR Government to the Federal Assembly for discussion and approval in connection with the amendment of the law on social security.

The potential elimination of differences in the production intensity between individual areas and enterprises constitutes a big reserve for the development of agricultural production. The already submitted proposal for the amendment of the law on agricultural tax, together with the revision of other economic tools, will make possible full utilization of this reserve in agriculture.

The existing law on agricultural tax became effective on 1 January 1975. It effected one fundamental change: gross income was replaced by the category of profit as the basis of taxation. Past experience has confirmed that this change proved effective in principle. The analyses of financial management of JZD and state farms, however, revealed that, due to the varying effectiveness of investments and other both objective and subjective causes, the income differentiation between the enterprises has become more profound and reduced thus the possibilities of greater equalization of agricultural production under all conditions of production.

For these reasons, it is proposed that the necessary changes be carried out also in the law on agricultural tax together with the measures affecting purchase prices and other economic tools.

The basic intent and objective of the proposed revision is that the tax, together with the changes in other economic tools, should:

--more consistently react to the differences in the income situation of individual agricultural organizations which are primarily due to the different conditions of production;

--create more favorable conditions for further intensification and more even development of agricultural production in all areas;

--more effectively contribute to the systematic increase in efficiency and economy, while insuring continuous financing of the reproduction process as planned.

To implement these intentions and objectives, the following changes are proposed.

The land tax rates should be revised so that they promptly react to the effect of the differential rent. These rates should be made uniform for comparable conditions in the entire CSSR.

The tax rates are computed in such a way as to react to the effect of the differential rent. Together with the progressive taxation of profit, they should create more equal room for the production of funds necessary for

financing expanded reproduction in all types of natural conditions. The land tax increase in more favorable natural conditions at the same time aims at stimulating interest in better utilization of agricultural land.

In view of the considerable differences in incomes of individual agricultural organizations, the rates of profit tax are graduated much more progressively so that they better correspond to the considerable differentiation of profitability level and planned needs of financing of the reproduction process.

According to the proposal, the tax burden will be reduced for the organizations operating in less favorable conditions and for the organizations which essentially do not attain even the average profitability subject to tax which amounted to 7.36 percent in 1978. If their profitability is below 5 percent, the profit tax will not be collected. Under the present conditions, this will apply to more than 20 percent of JZD and a considerable number of state farms.

On the other hand, the profit tax will be proportionately increased for the organizations achieving higher profitability which usually operate in better natural conditions or whose production structure allows them to attain more advantageous prices.

According to the adjusted calculations made for all JZD, the profit tax will on the average amount to 17.5 percent and together with the land tax will not exceed 20 percent of the total economic result.

The proposed scale of profit tax rates fully observes the principle that, if savings or bigger profit are achieved at a proportionate profitability increase, their appropriate share will be retained by the agricultural organizations.

It follows from the above that the adjustment of the profit tax does not undermine the initiative of agricultural organizations in achieving better economic results, but on the contrary stimulates it appropriately. At the same time, however, it takes into account the different operating conditions, which are affected primarily by various production factors, and uniform purchase prices in which the profitability rate with reference to individual products considerably varies.

Simultaneously with the revision of this scale, the surcharges on the profit tax on agricultural activity are being abolished because this arrangement proved ineffective in practice. This tax component for JZD amounted to Kcs 60 million annually. This activity is now regulated by the law on agricultural cooperatives according to which all organs of management must direct subsidiary production in such a way to comply with the interests of the society.

Subsidiary production is to contribute to better utilization of the labor force throughout the year by the organization of agricultural production and to its support, but it must not be used for speculation under any circumstances. A more progressive scale of profit tax will effectively be applied to the profit from this activity.

The general introduction of the uniform system of remuneration for work in JZD and the improvement of overall wage regulation will permit the discontinuation of the existing tax on wages and bonuses above the specified limit in JZD. The application of this tax could not replace the direct regulation of wages and bonuses which among other things is confirmed by the fact that different wages and bonuses are frequently paid for the same amount and quality of work.

The changes in agricultural tax will apply also to the citizens who use the land for recreation, kitchen gardening or other purposes. The present tax reliefs or exemptions from this tax remain intact.

All the proposed measures also provide for the application of khozraschet on state farms and stimulation of interest in their economic results as the 13th plenum of the CPCZ Central Committee demanded.

10501  
CSO: 2400

GERMAN DEMOCRATIC REPUBLIC

PUMP COMBINE TO INTENSIFY RESEARCH AND DEVELOPMENT EFFORT

East Berlin DIE WIRTSCHAFT in German Vol 34 No 10, 4 Oct 79 p 10

[Article by Dr Wolfgang Mueller: "Program Planning for Technical Progress"]

[Text] The 10th SED Central Committee Plenum has found in its deliberations that the demands on efficiency in our national economy are unmistakably and inexorably increasing. Therefore, all combines and enterprises must look for ways of contributing their share to this unavoidable increase in efficiency. At the combine Pumps and Compressors the primary question examined was how to improve the management and planning of scientific and technical innovation in the combine's 15 enterprises. A careful analysis of efficiency losses in implemented scientific and technical projects disclosed that certain shortcomings which do not become apparent until in production are in reality due to poor production preparation, i.e., to poor management and administration.

This includes, for example, shortcomings in management and organizational structure, poor processing layout, inadequate production planning and a poor communications system resulting in partly closely interrelated managerial, production and labor difficulties which have a deleterious effect on the progress of scientific and technical development. Therefore, intensification of production must be conceived and implemented comprehensively and include research and development. To that end short-term, medium-range and long-term scientific and technical tasks were set with the view of rationalizing production preparation.

These tasks aim at four targets which the combine Pumps and Compressors has set for its work in the field of science and technology:

1. Meeting international quality standards and market requirements.
2. Setting up a tight organization of research and development coupled with the ability of adapting the structure of the scientific and technical potential to the tasks at hand.
3. Creating a productive atmosphere in the structural units engaged in production preparation by means of suitable material and moral incentives.

#### 4. Securing the material and technical prerequisites to achieve outstanding results in research and development and duplicate them in production.

##### Cooperation Must Be Improved

On one hand good results in production can be achieved only by sufficient scientific and technical lead time and the timely introduction of new products on the market and on the other by transition from thematic planning, practiced currently in research and development, to the much more complex programmatic planning method. An essential element here is the need for improving the coordination of cooperation between the combine and its important suppliers, achieve better cooperation with enterprises in other sectors and with scientific institution.

Naturally, the key element in achieving a lead position in the scientific and technical field is the purposeful development of the research, developmental and technological base. In this respect the effort expended by the combine has already brought the first successes. In the second half of 1978, for example, 15 patent applications were filled, half the research assignments were completed ahead of time and the transition time for bringing new or advanced types of pumps into production was shortened by 25 percent. Currently a new generation of rotation pumps exhibiting a 30-percent increase in useful properties, a 25-percent saving in materials and requiring 20-percent less power is being developed by close cooperation of workers, engineers and researchers. The innovation of a certain type of pipe housing pumps alone resulted in a reduction of the power requirement per pump by  $7 \times 10^7$  KWh.

Here the allocation of collective assignments to start-up collectives of research workers, technologists, engineers and specialists has proven advantageous. The wealth of experience of all participants is thereby put to better use and the focus is on creating omnilateral favorable conditions for the introduction of innovations in production.

##### Comprehensive Programmatic Planning To Replace Thematic Planning

Highly productive work in research and development together with improved planning in the area of science and technology are required primarily to implement the state planning project "Application of microelectronics in pump and compressor construction," "New propulsion systems," and "Process pumps KRZH ND 16."

A considerable step in this direction is the adoption of comprehensive programmatic planning of scientific and technical progress. Programmatic planning involves the anticipatory inclusion of the planning of investments, the production structure, deliveries and supply of material and marketing already in the research stage and the initial stage of product and production method development. This means that the overall economic responsibility of the combines and their accountability should include also improved planned cooperation of the combine with its more important suppliers because high

achievement in research and development, timely introduction of new scientific and technical findings in production require an early coordination of subcontractor deliveries which must meet the technical and economic requirements of new machines or machine systems including the coordination of delivery deadlines and delivery volumes to meet the market introduction deadlines of new products and the production rate of the combine's enterprises. Only assured stable delivery arrangements can prevent breakdowns in the material supply of the scientific and technical base in implementing its findings in production, insuring continuity of production, strengthening the authority of scientific and technical planning and avoid the need to postpone deadlines and high inventories of uncompleted machines.

The experience gained by the combine Pumps and Compressors demonstrates conclusively that the stability of research and development, the efficient utilization of internal reserves of the scientific and technical base are assured only when long range planning and balancing includes the planning of subcontractor deliveries to prevent impairment of quality and delays in quantity of work accomplished. This is designed to solve also those problems which still beset for example cast and pig iron, track and guide wheels, electric motor and standardized pump parts production. In establishing such close cooperation with our subcontractors, what with the proceeding specialization and amalgamation of research and development facilities, thought should be given from case to case whether, in view of their close involvement, important subcontractors should not be coopted into the combine. This would surely raise the quality of planning in the area of science and technology on the combine level which, of course, will depend not on the volume of subcontractor deliveries but on overall national economic developmental criteria.

In the machine building industry production technology changes constantly as a result of scientific progress. These changes also follow unavoidably from international competition and the desire of domestic and foreign customers to acquire modern capital goods of latest scientific and technical design which places increased demands on the management and planning of scientific and technical innovation. These demands encompass the need for operative market research, insuring the profitability of exports, the ability to guarantee quality of world standard including the reduced need for replacement spare parts, environmental safety and increasingly the ability to deliver complete operational or automated installations. The clearer the main trend in the scientific and technical development in the production of pumps and compressors is recognized and accepted--also within CEMA--the easier it will be to plan the required research and developmental tasks, investments, supplies needed, the production structure and organization including distribution.

#### Management Tool--Intensification Concept

In accord with this trend the concept of long-range intensification became an important management tool in planning for the purposeful and continuing acceleration of scientific and technical innovation, its fuller exploitation,

the attainment of the world standard and the intensification of the renovation and modernization of the material and technical base of the machine building industry. Intensification helps to implement the overall strategy set for the combine by the party and the government and serves as the basis for informed preparation of prospective and annual plans. The result is improved planning reliability and greater evenness and continuity in scientific and technical innovation. The party's basic orientation, designed to improve the organization of management and planning of scientific and technical work in combines, includes the mastery of innovation processes by management as one of the key prerequisites. The tasks connected with innovation affect all reproduction stages and impact on the activity of great many management organs, enterprises, scientific installations, have a territorial impact and must be fulfilled within set deadlines. It is obvious that the consequence is the need for more comprehensive planning of scientific and technical innovation which involves the entire management system of the combine. New forms and methods of competition fostering active and productive cooperation of workers in accelerating scientific and technical innovation are likewise needed. To that end our combine, for example, introduced pay incentives also for worker collectives in research and development, construction, technology, supply and sales.

Accordingly, poorly prepared construction documentation, for example, or its late delivery to the construction department are entered in the production records of the construction department as a penalty. Equally rated are also shortcomings in the introduction of new production technologies or new products which do not become apparent until in production. They are entered to the debit of production preparation as an infringement against structural unity. The introduction of the principle of pay incentives in scientific and technical innovation and its implementation in production resulted in a marked intensification of activity in these sectors aiming primarily at attaining or surpassing the research tasks planned but extending also to catching up with unfinished work and eliminating output losses.

The results and experience gained in the combine Pumps and Compressors demonstrate conclusively that scientific and technical innovation is not only a very important factor in intensification but also that its effectiveness depends largely on competent management, planning and organization in all aspects of the reproduction process. This involves the structure and scale of production, the sphere of foreign economic relations, cooperation, capital investment and production capacity. These, in our opinion, are the compelling reasons for switching from thematic to programmatic planning in scientific and technical innovation not only in combines and enterprises but at all levels of the national economy. In this respect special emphasis must be placed on the machine building sector as the most important material resource of scientific and technical innovation. The long range planning of the production structure, the material technical base and of capital investments in cooperation with capital goods producing and capital facilities building combines must create the prerequisites for all projects on a high technical standard, shortening the time required for their planning and completion and reducing expenditures. Only close cooperation of all sectors involved can raise production purposefully and continually on a national scale by outstanding achievements in the field of scientific and technical innovation.

## PROBLEMS IN LONG-RANGE PLANNING VIEWED

Budapest FIGYEL0 in Hungarian No 43, 24 Oct 79 p 6

[Text] The Society for the Science of Organization and Management and the National Leadership Training Center cosponsored the Sixth Leadership Science Conference, held on 22-23 Oct in Debrecen. The participants of the conference--company managers and ministry and local government executives--discussed the main questions of leadership in three groups of themes. The themes were as follows:

- the tasks relating to the grounds for long-term decisions;
- the tasks of leadership to encourage creativity;
- the modern organization of an executive's work.

This article reports the main thoughts of the lectures and contributions that Zsigmond Bakos, the State Secretary [Assistant Secretary] of the Ministry of Light Industry, stated that some of the workers who work in the various areas of our economy view the possibility of long-term goals and plans--and even, at times, middle-range plans--with skepticism. This is the effect of events that take place in the world economy and our country. These events are complex, change rapidly and are sometimes difficult to review.

The question is: is it necessary, possible, or useful for companies to produce a long-range concept, a strategy? To what time period and extent is it worth fixing concepts? How does a company's environment (the ministries and local government) hinder or help production plans? To what extent is it correct to involve the middle- and lower-level managers and workers in the formation of a strategy?

### More Flexible Methods

These questions cannot be answered in the form of general, ever-lasting pronouncements any more. The recognition of this truth helps to find the solution: the concepts and methods relating to plans and planning work must be made more flexible. Planning work must be made a tool of continuous adjustment between the given situation and long-range concepts so that it will help the realization of our economic-political conceptions.

There was a lively debate on how many years' duration a company's long-range plan should have. In the capitalist countries especially, there are divergent views on this, with some people regarding even a 4-5 year plan as long-term. In our practice long-term plans embrace 10-15-20 years. Thus in the view of Dr Janos Polonkai (director of economics at the Ganz Electric Company) it is essentially copying the country's long-range plan. The reason for this is that the companies usually do not set the time horizons of their own long-term plans but adjust to the time slot that was set for their industry's long-term development conception.

Tibor Folkmayer, an executive at the OVK [National Management Training Center] commented that the effect of the regulations is designed to be 3-4 years in general. This causes problems. It not only brings long-term decisions into question but even those in the middle range. Another factor that lowers effectiveness is that even among the more significant regulatory changes there are refinements and corrections. Although one has to count on changing circumstances and unexpected events in the regulation of the economy the too-frequent switches in the limiting function may disarrange the planning perspective.

For this reason, growing numbers of authors in the planning literature propose continuous, or "rolling" planning. Several lecturers and commentators argued for this method. Present company practice imparts a certain cyclic behavior in decisionmaking whereas in real life changes reach the companies continuously.

Along with the clarification of the methodology, another very important condition for the realization of the plans' goals is the correct number of personnel with the correct preparation, stated Zsigmond Bakos. Therefore it must examine, as an independent part of planning work, to what extent the intellectual capacity existing at a certain place is able to carry out the tasks and what moves must be made to assure the presence of intellectual capacity that guarantees the success of the work. The role of leadership, along with political reliability and professional training, is growing in importance today.

In spite of decade-long experiments, it is still not clear which are those most important data and plan goals that are useful to reveal to and discuss with the workers collectives. Discussion of the plan is still one of the weak points in workplace democracy. The basic reason for the failure of the many experiments is, according to Zsigmond Bakos, that some of the managers who direct and organize planning work think--perhaps because of the great complexity of the work--that the subject could hardly be discussed in an informed way by the people who work at the benches or the office workers whose job is not directly connected with planning. Since active participation is very low at plan discussions (or at any other meetings), this assessment appears correct at a few places. But if we analyze the situation in more detail, we find that it is possible that in those places the leadership does not request the opinions of the working collective and, though the monopolistic restriction of the data that are necessary to form an enlightened

opinion, makes it impossible to have an informed debate. Another extreme is where the workers are flooded with a large quantity of information which is impossible to review. The result can be the same: indifference. At places where the leadership sees to it that the working collectives, employes, middle-managers, etc, receive continuous and good information to a depth that is rational, plan discussion are more active and the manager may get many observations, useful criticism, and suggestions that can be useful to the company.

#### Interest and Risk-Taking

Even when the personnel is proper a company may not completely adjust to the demands of the domestic or, especially, the foreign market. This problem was phrased by Dr Janos Polonkai in the following way: "The changes of the organization can influence the long-term plan." He claims that where the competitors are giant companies or trusts, the domestic companies must, in the interest of competitiveness, adjust their sizes. A reverse situation can also occur: when, in the interest of flexibility and faster adjustment to the market, the goal may be to leave a trust and set up a company of medium size.

Several speakers commented on the risk-taking of the companies. They said that the company managers should, as they form long-range concepts, be brave and dare to accept the risks that are part of the new. But this is not in the interest of the company under the present conditions: the regulating system does not give an incentive to the companies and their managers to do this. In Tibor Folkmayer's opinion, e.g., the situation at present is absurd: the company managers are urged to be risk-takers and strategic planners but their work and company are judged on short-term results. It is also improper to expect company leaders to think on the national level and make decisions that are in the national interest when their work is judged by different criteria. The goals sketched by the ministries and local governments do not always point in the same directions. While the central organs demand risk-taking from the company managers, in practice they make rules that unreasonably limit the sphere of activity.

Most managers feel and know that the structure problem is a strategy problem. Due to loyalty and conscience they carry out some of the desired steps. It is regrettable that the situation and the system does not help these moves properly.

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CSO: 2500

VIEWS ON ECONOMIC DEVELOPMENT DISCUSSED

Budapest FIGYELO in Hungarian No 43, 24 Oct 79 p 4

[Article by G. K.: "Debate Over Development of the Economy"]

[Text] A passionate debate followed the lecture given by Dr Otto Pirityi last week and entitled "Balance--Growth--Structure," which the KISZ organization of the Hungarian National Bank organized within the framework of a professional club by no means frequented only by KISZ members. In the following, we briefly present the most substantial statement initiating the debate (part of which in any case appeared in the 1979/28 number of our paper under the title "The Desirable Extent and Direction of Growth"), at the same time summarizing the more important comments that were made.

Speaking about balance, the lecturer criticized the widespread attitude today that does not examine the structural causes of surface imbalances, but mechanically strives to create a balance by "cutting down" excess consumption. In reality, the foreign economic balance can be improved only if we improve the resource-utilization and efficiency balance-sheets. His statements met with general agreement from the speakers.

In connection with the rate of economic growth, the lecturer distinguished two types of views. The one is the concept held by him being "Realpolitik," which regards as unavoidable the permanent and forceful lowering of the growth rate. The second concept on the other hand--called "voluntarist" with a certain self-irony and also represented by him--does not simply proceed from givens at the time of the determination of the growth rate, but from certain requirements, that is, it traces the minimal rate of growth back to the development of a standard of living that is regarded as desirable.

Numerous people disputed the view represented by the lecturer. As they pointed out, even among capitalist countries the only ones that have been able to adapt relatively rapidly to changed relations have been those that undertook a radical slowing down of the rate of economic growth. A moderation of the growth rate is also widespread in the socialist countries. Besides this, our growth rate denotes a holding back in relation to an overheated situation.

Several people also disputed in principle the reality of the requirements related to growth, stressing that a condition of genuine freedom of decision is the recognition of the forced paths of our development. Nevertheless, there are now very strong limits to growth in a quantitative sense.

According to the opinion of the lecturer, the principle of "equal pay for equal work" must be realized in time and in real value; that is, for example, for an amount of work identical to last year's, there will be payment this year of the same real value. Analyzing the possibility of differentiation, the lecturer held three conditions to be indispensable to this: a moderate price increase, a tangible rise in average real wages, and a global labor-force balance.

These views did not meet with the agreement of the listeners, either. In a period when the whole of the country is suffering an exchange-rate loss it is insupportable that the devaluation of national work not be mirrored in wages. There is a need on every level for greater output than heretofore to protect the gains. In connection with the possibility of differentiation, on the one hand, the view was voiced that the considerably greater income obtainable in the second economy is impeding the impact of that; on the other hand, from experience, differentiation has not been characteristic in a period of rapid growth in real income, either.

Examining the interconnections of the production structure, the lecturer spoke about the paradox whereby, according to different principles, at the time of the transformation of the production structure, labor-, capital-, material-, and energy-intensive articles must be avoided. This is obviously impossible. In reality, products must be profitable, independent of the different indexes.

In connection with the transformation of the production structure many also cautioned against the implementation of an excessively proportioned energy program, stressing instead the importance of the development of background industry and infrastructure and, within this, of the population infrastructure.

An interesting exchange of ideas developed about the conditions for the making of the necessary decisions. In the opinion of several people, what must primarily be discovered is the self-movement, the character, of those processes that to a greater or lesser degree limit the making of optimal decisions. Economic policy decisions do not appear in a vacuum, and on the basis of unfavorable experiences of past years what must be striven for is that individual partial conceptions constitute a consistent system.

During the debate several people also explained what great significance there is to the fact that the 8 December 1978 session of the MSZMP Central Committee also laid down in sharp principle that in economic work the economic balance has priority. The decisive condition of development is the extent to which this conception succeeds in creating suitable conditions of economic management.

## MODIFICATION OF RESTAURANT PRICES EXPLAINED

Budapest NEPSZAVA in Hungarian 1 Nov 79 p 3

[Article by Zs. G.: "Modification of Restaurant Prices"]

[Text] Business volume drops--Alcohol is becoming more expensive at class II establishments--The enterprises will not be subsidized next year--Drinking water and fruit on the tables

The effects of the restaurant price system and its modifications which became effective on 23 July were discussed by Imre Gellai, departmental head of the Ministry of Domestic Commerce, with reporters.

He said that during this summer the prices at cafeterias for workers, children and students were raised only to compensate for increased raw material costs. As is widely known, prices were raised more than that at public restaurants. In class I restaurants and in superior [those above classification], the prices are already commensurate with the service provided while an 80 percent price hike, instead of the actual 50 percent hike, would have been necessary to make the class II restaurants self-sufficient. Class III as well as class IV establishments, and kitchens at working places, schools, kindergartens and nurseries receive state support.

They tried to estimate ahead the effect of price increases and this was largely successful. During August and September restaurant volume increased by 13 percent in terms of current prices and decreased by 5 percent in terms of unchanged prices compared to the year before. Both the enterprises and the waiters were effected by the decreased number of guests as a result of which we could also witness favorable changes. For instance, more modern cookbooks were published, the menus became more versatile, more use of the relatively inexpensive raw materials such as chicken, eggs, vegetables and fruits in preparing the dishes was made, and the behavior of restaurant personnel also improved.

Changes in volume contrary to the expectation of specialists occurred only in class II and self-service restaurants. In these, there was an about 25 percent decrease in volume. This is the more noteworthy because one-third of the total restaurant volume was consumed in class II places.

Based on experience, prices are now being somewhat modified. At class II establishments--restaurants, beer gardens, expressos, confectionary shops and food bars--the price of food is being lowered by an average of 10 percent while the price of beer and hard liquors is being somewhat increased. An average for the industry is 10 percent, which means that individual restaurants will lower their rates differently. For instance, at housing settlements it will be more pronounced because these can have very little traffic at current prices—at other places it may perhaps be less pronounced. The 10 percent decrease in prices, again on an average, results in a 2 to 5 forints decrease in the price of a given meat dish. The price of one mug of beer will increase 0.7-0.8 forints, that of a 1/2 deciliter (hard liquor) will increase 1.6 forints at class II places. The price of wine, soft drinks and coffee will remain unchanged.

At class I and superior class eating establishments, the enterprises can decrease the price of dishes by 17 to 20 percent depending on the character of the establishments and demand for their services. This is merely a possibility the use of which will be left up to the individual enterprise. For instance, price lowering would be unjustified in those hotel restaurants which are already booked for the year by foreign guests for room and board.

There is no price change at class III and IV eating establishments and in the dining rooms of workers, children and students. From the report by Imre Gallai it also became clear that, starting from 1980, the commercial eating establishments must be managed in such a manner that they will not need support in spite of increased costs, that is: they must become self-supporting.

Independently from the price changes, the Ministry of Domestic Commerce is also attempting to resolve two other problems directly affecting guests. One of them is to call upon the enterprises and cooperatives to see that fresh drinking water is always and everywhere on the tables in contrast to the current situation where guests are ashamed even to ask for it.

Up until now there was hardly a restaurant which also offered fruits on its menu. Namely an orange or apple could be served only if each piece of fruit was weighed and its price was calculated individually. Accounting is now being simplified: The restaurants are being supplied with choice fruit of largely similar size which can be sold at a unit price. Moreover, it can—and it should—be set out on the tables in little baskets just as is done with bread.

The price changes are going into effect continuously [sic], beginning 1 November. This means that there are places where we can already eat for less but the great job of recalculations can be completed by the enterprises only by the end of the week.

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CSO: 2500

ROLE OF FRUGALITY IN ENERGY POLICY VIEWED

Budapest ENERGIAGAZDALKODAS in Hungarian No 9, Sep 79 pp 379-384

[Article by Geza Szili, electrical engineer, deputy minister, Ministry of Heavy Industry: "The Role of Frugality in the Energy Policy"]

[Text] Perhaps at first glance it appears unusual that I selected such a timely question as frugality with energy, for the topic of a commemorative speech on the occasion of the 30-year anniversary of the existence of the Scientific Association for Power Engineering [ETE]. Yet, selection of the topic is justified not only by the fact that today this is the most timely task of our energy management, since I can safely say--the founding members of ETE who are present here, energy managers toughened in the hard battles of the first decade, are my witnesses for this--, frugality with energy has followed our association throughout the entire history of its existence. For the association's younger members it has the appearance of history if I call it into their memories that at the start of the First Five-Year Plan one of the first major events organized by the ETE (in march 1951 in Budapest) was the National Conference on Energy Frugality, and such topics were among its main topics as organizing the nationwide rationalization of energy, creating a network of operational energy experts, working out and introducing energy standards. Even without referring to additional examples, I can conclude that the entire activity of our association's members and the operation of our departments is in a natural manner permeated by the self-explanatory engineering demand of experts working in the area of energy management which desires to insure fulfillment of the energy demands with frugal solutions appropriate to the technological standards of the times, and to the economic situation.

On the other hand, the question may come up: is it not justified by the present world situation of energetics, that frugality should become an organic component of the energy policies of the various countries, including our country. Permit me to remind you: since liberation to the present we can divide the development of Hungarian energetics into essentially three major periods, each of which had an energy policy concept appropriate to the

\*Based on speech given by the author at ETE's [Scientific Association for Power Engineering] 30-year jubilee general meeting (Budapest 20 February 1979).

conomic goals and conditions of the period. The requirement of frugality can always be found as a more heavily emphasized or less emphasized component of these concepts.

#### Modification of the Goals of Energy Frugality in the Energy Policy Concepts of the Last Three Decades

During the 1950's the autarkic economic policy and the heavily stressed goals of developing the national economy, the tightness of available energy sources and the limited international energy cooperation opportunities necessarily emphasized strict frugality in energy management. Back then even under such conditions we were unable to avoid some greater or lesser, at times severe supply limitations, and these provided the incentive for the direction of energy management to take on the shape of a well organized, centralized format, a system of institutions equipped with governmental authorities.

Among the guidelines of our energy policy concept defined along with the better balanced economic policy of the 1960's and with its proportional development goals, we lined up the requirements of being economical, and of achieving the modern technology levels, right next to the availability of supplies. It can hardly be debated that these newer goals of our energy policy were also conceived in the spirit of frugality. The structure change of energy sources satisfied the frugality requirements of energy management in both interpretations by taking advantage of the benefits of the hydrocarbon program as well as of the international sharing of work in energy management, with the domestic resources.

The sharp increase of petroleum prices in 1973 and 1974, or the so-called "energy crisis" by its publicly used name, created quite a new situation. The national economy's load bearing ability and the foreign trade situation prevent us from continuing to develop our energy management according to the trends of the previous time period by further changing the structure of sources and of consumption through increasing the ratio of hydrocarbons. As it is well known, the limitations of this are defined on the one hand by our domestic hydrocarbon supplies, and on the other hand by the extremely high world market prices of hydrocarbons, especially of petroleum and petroleum products, primarily purchased from capitalist sources, but gradually also within the socialist world economy. Today even that is considered a commonplace, yet I feel it is necessary to call it to your attention, that the so-called "energy crisis" exploded within the framework of a changing of era in the world economy, and the large increase of raw material and energy prices is only one of the ways this manifesto's itself. Thus, looking at it from the Hungarian viewpoint, the fundamental difference in comparison to the conditions of the 1950's is that today we are facing a new situation of international proportions, which fundamentally affects the development of energy management in the whole world.

In the era of the so-called cheap energy, due to the uneven geographic distribution of energy sources and particularly of the hydrocarbons, the ever growing extent of petroleum and natural gas import appeared as a worldwide tendency. Under the new conditions which have developed since 1974 and which

promise to be with us for a long time, the small as well as the large countries, rich and poor ones, economically better or lesser developed independent countries all alike are compelled to designate the password of frugality to lead their medium and even their long range energy policy concepts, regardless of whether they recognize the world market price change, possible danger of an embargo, increasing exhaustion of the hydrocarbon sources, or the ever increasing demand for energy management investment which exceeds the rate of growth of the energy requirements as the main reason or this, the latter one of which makes implementation of the economic development programs particularly difficult all over the world.

Hungary, which has relatively modest supplies of good quality and pure energy sources, first of all of hydrocarbons, and at the same time its supply of investment means is also limited, must give maximum attention to both aspects of frugality in its present medium and long range energy policies. In accordance with this, in the future the traditional triple requirement of our energy policy--certainly of supply, that it is economical, and the modern technological level--must be interpreted in a spirit farreaching of frugality. To define it more specifically: we have to achieve our economic development goals, expansion of production, increase the standard of living with the least expenditures in the area of energy supply, whether we are considering the thermal equivalent values of energy sources, or the investment requirements of the energy supply, or its technological solutions. In the present economic situation this requirement--even though it is not the sole such factor--is basically of economic policy nature in its content, and it must decisively influence the transformation of the industrial structure by preferring the less energy-demanding industrial branches and technological processes, the transportation structure by selecting the ratios of freight and passenger transportation methods and equipment, or the housing construction policy primarily from the direction of construction technology and of the related infrastructure of energetics.

Without attributing a greater role to energetics than it deserves, I must emphasize that decisions can no longer be made in any areas of our economic life without weighing the energetics consequences.

#### Our Long Range Energy Frugality Goals

Due to the outlined preliminaries the energy frugality goals have received a decisive role among the long range energy policy guidelines.

Resource circumstances definitive in character. As it is well known, we cover more than half of our supplies from imports, more than 70 percent of this is hydrocarbons, nearly 60 percent is petroleum and petroleum products. The world market price increases and the requirements to insure additional investment resources alike urge us primarily to limit this portion. Thus in the future because of frugality considerations we wish in general to increase the use of domestic sources. We will increase research for and development of domestic hydrocarbon inventories, and will cultivate them with secondary and tertiary

methods. We will increase the use of domestic coal, primarily in power plants but also for coke production, based on the bituminous coal of the Mecsek [mountain]. We will support the development and use of isolated pockets of natural gas, or ones with high inert content, and of the geothermal energy sources. In the interest of decreasing use of import sources we wish to moderate the import of primarily the more expensive capitalist petroleum and petroleum product imports, while at the same time expanding our foreign trade of energy sources with the friendly socialist countries.

Selecting the energy sources and our energy structure has always been an organic part of our long range energy policy concept. Besides the foreign trade policy viewpoints, that optimum alternative which resulted in the smallest expenditure to the national economy in the entire vertical of the energy supply, was always developed as a result of comprehensive economic studies and decisions in developing the long range energy source structure. Under today's stricter conditions the decision places even greater responsibility on the organs responsible for the country's energy supply.

Efficiency guidelines viewed from the consumption or demand viewpoint in the last decade and a half at best were included in energy policy in a broad at conceptual basis. But today the fulfillment of these requirements requires a detailed review of the ultimate demands. However, all measures which decrease the absolute value of the demands or which modify the structure of demands conforming to the changed conditions of the resources may result in significant savings exactly because when these spiral through the supply process the smaller demands and smaller losses not only tie down smaller resources but at the same time also make it necessary to provide smaller transport, distribution, storage and particularly smaller refining and producing or import capacities. The resources or capacities thus saved can then be made available to meet new needs.

The methods and means of decreasing, modifying the requirements are extremely rich and change almost individually as a function of the technological or other characteristics of the consuming branch or sector. However, we must make a fundamental distinction between the new, incremental demands and the needs of the consumers which already exist today. While in the case of the former the appropriate organizational conditions, direct or indirect incentives provide the way to take advantage of the opportunities practically completely, in the establishments already in operation. The energy saving opportunities can be exploited in only a very limited manner--this is the classical area of the so-called "energy rationalization"--and here we especially cannot do without the forms of central assistance which implement the national economy's interests. It is a common characteristic of both areas that--except for a few organizational measures which are practically cost free--in all cases there is a need for greater or lesser investment expenditures, even if this need for means is significantly less than what we would have to make available to insure the same amount of energy sources not by savings but by creating new resources.

According to the detailed analytical studies mentioned above which cover all areas of the national economy, the energy saving program of the next plan periods by 1985 may result in savings of about 12 to 14 Pcal per year and about 30 to 32 Pcal/year by 1990, equivalent to the import of about 3 million tons of petroleum (this latter is about 7.5 percent of the national economy's 1990 energy requirement). About half of these energy source volumes need no assistance from the state. Thus our unexploited reserves are quite significant. However, during the time period of the Sixth Five-Year Plan 3 to 4 billion fts in the Seventh one about 5 to 6 billion fts of so-called energy rationalization credit to be provided from central resources will have to be extended for the other half, which--according to the present conditions--the affected enterprises and economic operating units will of course also have to supplement with their own monetary means in an extent exceeding this. Thus, implementation of the guidelines and ideas included in the long range energy policy concept assumes multilevel, well coordinated preparatory work and system of measures.

As I have already said in my introduction, energy savings and the energy rationalization activity in our country can look back now on a past of several decades. Yet the implementation of such a comprehensive program requires a great concentration of experiences and the available professional strength. It is not only the festive occasion which makes me say this, but in this we are counting also to a large extent on the cooperation of the association's activists.

#### Main Tasks of the Energy Saving Program Extending to 1990, Saving Opportunities in the Main Branches of the National Economy

In short, we can establish the main goals and tasks of our energy saving program which constitutes a part of our energy policy concept running until 1990, with the following:

1. Decrease the growth rate of energy demands;
2. Frugality with hydrocarbons, first of all with the most expensive capitalist import petroleum and its derivatives;
3. Decrease the peak demands line-delivered energy supply methods (electrical energy, natural gas, remote heat), by this reducing the load on the generating and delivery capacities, postpone establishment of newer ones, and in general decrease the need for investments in energetics;
4. Decrease the losses in the entire supply process, from the consumers to the producers, sources, and generally by decreasing demands to the levels of the realistic needs.

These criteria which can be defined in very general terms manifest themselves in many forms in the areas of the individual sectors, portfolios and branches of industry.

Undoubtedly industry, the largest consuming sector, offers the greatest opportunities. Without desire of completeness, for the sake of examples I will list a few of the available opportunities which have been examined:

--To show how true it is that solving the problem must be sought not only with the classical methods of energy management, first I would mention such a measure of economic development and economic policy character which is also related to one of the key tasks of our economic life, the changing of the production structure: to wit, it is desirable for Hungary to place emphasis not only on the energy-demanding producing branches of industry but also on the less energy-demanding processing ones, and in this manner take the best possible advantage of the cooperation and also at the same time energy saving advantages of the socialist integration deriving from this. As a realization of this there is not one single high energy-demand objective among the investments now in progress and the ones which have been decided, and with the existing capacities we endeavor to moderate the energy demands by limiting the increases of production quantities, improving the production structure, and expanding the international cooperation. As an example for the opportunities in integration--beyond the already often mentioned Soviet-Hungarian alumina-aluminum agreement--I would refer to that agrochemical agreement within the framework of which in exchange for high energy demanding chemical fertilizer types we give to our partners chemical products of low energy content (for example plant protecting chemicals).

--Large savings opportunities are also offering themselves from the application of modern technological processes. One example for this is replacement of the Siemens-Martin process with the steel production technology using a converter.

--There are many heat utilization opportunities in numerous industrial areas, but also in agriculture and even in the communal sector.

In the areas of metallurgy and construction material industry for example in many places we can still find unused flue gases; wasted steam and condensed water in the lighter and food industries.

--In the interest of decreasing the processing wastes, improvement of the industrial technologies must also be emphasized separately, because these all also represent wasted energy quantities.

--Those combustible waste materials which can be found in the wood processing, chemical industrial and other areas, can be used directly.

--In a number of industrial and agricultural operations the obsolete boilers, driers, uninsulated steam and hot water lines, unregulated firing equipment, etc. are sources of wasting energy.

One of the most important and largest areas for saving energy is transportation. Here the opportunities can extend from modifying the traffic structure--for example faster development of electrical traction on the railroads instead of

diesel traction, in the development of mass transportation networks the replacement of buses with trolleys, encouraging water transportation instead of rail or public road transportation, replacing gasoline powered vehicles with vehicles powered by diesel fuel, decreasing empty runs of freight vehicles, the maximal utilization of vehicles and trains, and the use of mass transportation vehicles instead of private motor vehicles.

The residential-communal sector, and even within this the heating demands are perhaps the most difficult area of energy consumption to control and exactly because of this, also the most promising area of energy saving opportunities. It is particularly valid here that if for example we decrease the indoor heating temperature demands to the extent of realistic and health requirements, or if by improving the technological discipline of the construction industry better structures are manufactured for sealing the openings, the wall structures are made with better thermal insulation, and last but not least if our building engineers design sizing processes which insure the conditions for more circumspect, more economical operation, and design efficient equipment and apparatus which can be well regulated, this can save very respectable quantities of energy performance and heat producing capacities.

It is justified to mention also the energy producing industrial branches, as we must seek new solutions by changing the conditions of the structure of resources, partly in the large conversion plants and partly in the heat supply systems. In accordance with this, in the future the public service power plants will be built primarily on the basis of coal or of nuclear energy. Today we are already making maximum use of coal-based power plant capacity, broad based studies are being conducted to provide heat with coal based power plants, among other things--also from the environmental protection viewpoint--to exploit the transportation of heat over long distances. We wish to make use of the savings opportunities concealed in the coupled generation of electrical energy and heat.

#### Preparation and System of Means for Implementing the Program

The selected samples only modestly illustrate the multitude of the yet unexploited reserves. The remaining two years of the Fifth Five-Year Plan from the viewpoint of the energy saving program serves the considered selection and preparation of exactly that multifaceted system of means by which those many problems, tasks and mainly the new ideology are fixed in the conscious of the consumers and producers, dicerting authorities and citizens, energy management experts and the average layman alike, which are indispensable for the successful implemtation of the energy saving program. Even though we might almost say that as many methods of approach are desirable as there are energy saving possibilities, yet the means to be used can be included in a few larger groups according to the following:

#### Measures of Organizational, Planning and Governmental Character:

--I would mention first the top level positions, resolutions, guidelines which have defined the outlines of the energy savings program and elevated it to the rank of the so-called central development goal programs.

--Due to measures taken by the government the large energy consuming enterprises must work out energy saving provision plans, the portfolios energy saving action plans, and they must build these into their five-year plans.

--Studies to uncover and analyze wastes must be continued at the enterprises, economic operating units and portfolios, which will serve as basis for new energy saving and energy rationalization suggestions.

--The energy managers of enterprises and branches stand in the front line of the energy saving activity, therefore we deem it necessary to give them more authority for the more efficient solution of their problems.

--Not only the designation of tasks but also the systematic checking of implementing them are of key importance in carrying out the program. The portfolios must systematically evaluate their energy saving activities.

--Better preparation, acceleration of the energy rationalization activity with its great past is a concrete task, so that the monetary means available for this purpose can be used most efficiently, and without delay. We see one of the main forms of this in expanding the system of major energy rationalization undertakings.

--Modern advanced educational training programs must be organized for the professionals directly and indirectly interested and involved with saving energy, to better familiarize them with their tasks.

--In the network of research and development institutions the discovery of energy saving opportunities, study of the specific energy consumption indices of the various products, scouting the possibilities of decreasing them must be treated as a central task. Within the so-called Central Energy Management Research Goal Program, priority must be insured for the research tasks related to [energy] savings.

--Perhaps it does not fall into the line of all these organizational measures which are the overwhelming responsibility of the governing organs, but also of the enterprises, and primarily reflects on the level of the plants that in all production places care must be taken with appropriate organizational steps to improve the technological discipline, to strictly observe the maintenance and service requirements of the production equipment, exactly in the interest of taking full advantage of the local saving opportunities.

#### Project Decisions, Measures of Governmental Character

This group of means organically related to the above topic area will in essentially a similar manner, without particular expenditures provide a way for implementing the energy saving program, but it is also an indispensable precondition of it, thus one of the key elements of the preparation phase. Such tasks, belonging primarily in the sphere of responsibility of centrally directing the management of energy, are the following:

--We are restricting the practice of assigning energy sources and in contrast with the local, partial interests we must gain validity for the interests of the national economy. Within this framework, all those consumers have priority in selecting their energy sources where the exchange opportunities are limited or are very costly (for example transportation, chemical industry, uses of material character). Further, the residential-communal consumers have priority but here we wish to conduct a strongly differentiated practice of assigning energy sources, according to the region, purposes of utilization and particularly according to the methods of supplying heat. However, we are strictly limiting the use of hydrocarbons in furnaces.

--We again place on the agenda the review of investment proposals and programs from the energy management viewpoint, and controlling these still in the planning phase, to avoid the necessity of building such establishments which may later present energy rationalization demands due to poorly interpreted frugality with investment means when the investment decision was made.

--Review, expansion of the specific energy utilization indices, standards, normatives, and making use of these in broader circles is in the plans, mainly in the areas of fuel utilization, but also generally in the various areas of hydrocarbon utilization.

--New technical sizing specifications, branch standards, technical-economic normatives related to determining the heat and other energy needs of primarily the residential and community buildings are in the process of being worked out, or are just about to be published.

--The 1979 energy management codification program projects a whole series of statute modifications and issuance of new statutes for example in the following topics:

--heating of rooms with central heat supply (prescribed indoor temperatures, tolerances, control),

--about the conditions for manufacturing, importing, selling electrical heating equipment,

--about the use of electrical energy for the purpose of generating heat,

--about issuing permits for electrical heat generating and absorption cooling equipment,

--about the introduction of summer [daylight saving] time,

--about the conditions of establishing, modernizing, maintaining electrical public lighting equipment.

--It is in the plans to publish new operating, maintenance and instrumentation instructions in the interest of efficient operation of energy consuming equipment. In the future household appliances will have to be sold with

such operating instructions which contain the information necessary for efficient use even by the non-expert consumer.

### Role, Responsibility of the Energetics Experts

From the foregoing it is obvious that from the viewpoint of implementing the program we consider the responsibility and good cooperation of the central directing apparatus of energy management, as well as the governmental organs cooperating with it and last but not least the enterprise, branch and regional energy engineers to be of decisive importance. I consider the work of all those engineers, technicians to be of similar weight from the viewpoint of carrying out the program, who deal with the planning and investment of energy producing, transporting, transforming, or using equipment and installations in any area of the national economy. This apparatus fills a key role from the viewpoint of whether the newly created residential, community and industrial buildings, the various technological installations, or the entire plants will be examples for wasting energy, or for saving energy. That is, it is obvious that the decision of the designer and of the investor will automatically determine the operating limitations of the operator, of the consumer, no matter with what convincing propaganda or with what incentive tools we wish to force the latter ones to operate their plant frugally. An extreme example for this is the residential and community sphere, where especially we cannot expect the desirable behavior if its conditions, for example in the systems which supply heat from a remote location cannot even be implemented due to the building machinery design practices and to the lack of measuring and regulating equipment. In this respect the standard plans which insure energy saving operating practices have outstanding importance, since their mass application can for many years determine the conditions of energy utilization in good or in bad direction.

### The Decisive Conditions of Frugality with Energy Are: the Well Prepared Energetics Machinery and Equipment Manufacture and the Well Organized Energy Supply Network

The topic areas of industrial background and industrial services related to the operating of energetics equipment are closely related to this area of thought. All governmental measures, economic incentives, or organization are wasted if the domestic industry manufacturing energetics machinery, equipment and appliances, or the foreign trade, and also the service sphere are unable to insure the conditions for implementing these. Thus it is an indispensable condition of our energy policy concept, and of our energy saving program, that the machinery manufacture or foreign trade should take care in accordance with the demands to make available consuming equipment with good efficiency, which can be well regulated, can be automated, and which cause as little waste as possible, the equipment, accessories, instruments needed for these, for the new installations as well as for replacement of the old ones. It is indispensable that besides manufacture, the replacement of spare parts to insure frugal operations should also be organized, and at the same time it is also of key importance that an appropriate service network also be organized in the interest of maintaining and tuning

up particularly that consumption equipment which was sold and is being used in large numbers. In connection with other areas of energy consumption, conditions to be evaluated in a similar manner are for example modernization of the manufacturing of closing devices for [room] openings, expansion of insulating material manufacture, or in the area of motor vehicle repairs the popularization of diagnostic equipment, encouraging their use; but also in the same way the insuring of a production structure which conforms to the changed energy source structure and to the frugality requirements, for example by means of coal-fired furnaces or modern radiant heating equipment for the population.

#### Providing Economic Incentives, Modification of the Energy Source Price and Tariff Systems Are Indispensable Tools of Frugality

In conclusion I will mention the economic incentive system of implementing the energy saving program. [T]he system generates interest in the producer and in the consumer (besides the direct governmental incentives), in the planner and in the investor to choose the energetics solutions and behavioral forms which are favorable to the national economy. In first place among these is the modification of the producer and consumer price and tariff systems, within the framework of which beyond the necessary price increases for hydrocarbons we must end the distortions of the interest relationships particularly in the consumption of electrical energy and of heat supplied over long distances. The experience of many years in providing national assistance to the energy rationalization investments and in extending credit for such purposes must now be further developed by the possible expansion of the presently available means, but essentially by maintaining the present system of competitive bidding [for such loans and credit].

#### The Change of Approach Requires Broad Economic and Social Unification of the Professional Resources

The things said above--I think--convincingly prove that the solving of an extremely important, very many faceted complexum of tasks is awaiting us in the coming years. As I have already said earlier, the secret of success is in the preparation, for which we must mobilize all available professional resources. Permit me to again recall the 1950's, the epic age of the association. Just as then, the same way today we cannot do either without those well trained older colleagues of ours with rich experience, nor without the younger ones who perhaps adapt themselves better to the new conditions and who have newer information, all of whom I am convinced are fired up by the same enthusiasm on hearing about this program. I ask them, I ask the leadership of the association, the professional departments and the regional organs in the name of the Ministry of Heavy Industry, in the name of the heads of those portfolios primarily responsible for the country's energy supply and for the implementation of this program, to accept an active part in preparing and carrying out this program. I think the primary task is perhaps in the shaping of attitudes, and also everyone has a primary task in their own areas of work, in the activity of uncovering teh wastes, in discovering and fully exploiting the energy saving opportunities. The association's

various organizational units can also group all these opportunities into bouquets according to branches, factories, settlements or settlement units and can present these as independent actions before the appropriate organs. I trust that the membership and leadership of this social association with rich traditions, will be an inexhaustible source of new energy saving ideas and forms of implementing them.

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CSO: 2500

ROMANIA

FACTORS INVOLVED IN HIGH RATE OF ECONOMIC GROWTH TRACED

Bucharest REVISTA ECONOMICA in Romanian 24, 31 Aug 79

[Article by Dr Marin Popescu of the "Stefan Gheorghiu" Academy: "Factors in the High Rate of Economic Growth and Their Economic and Social Effects"]

[No 34, 24 Aug 79, pp 7-8, 12]

[Text] In the 35 years that have passed since the victory of the national, social, anti-fascist and anti-imperialist revolution, Romania has made remarkable achievements in all fields of activity, transforming itself, under the leadership of the Romanian Communist Party, from a poorly developed agrarian nation into an agrarian-industrial state with a dynamic industry and an agriculture fully in the process of modernization. During this period, the Romanian economy, and especially its industry, achieved one of the highest rates of growth in the world. Thus, during the 1951 to 1977 period, the national income, the indicator which best summarizes the results of economic activity, grew at an annual average rate of 9.7 percent and 8.6 percent per inhabitant. During the same period, total industrial production increased at an average annual rate of 12.9 percent. Although our country is currently in a higher stage of economic development in comparison to the stage during the first years of socialist construction, the high growth rate has remained an essential characteristic of economic growth, a fact reflected by the achievements in recent years. During the years 1971 to 1977, an average annual rate of growth of 10 percent was obtained for national income and 9.7 percent per inhabitant, while total industrial production reached 12.7 percent.

The high dynamism of economic growth in our country is also shown by the comparison with the index of growth in other socialist countries. Throughout the years of socialist construction, the Romanian economy developed at a rate higher than the world average (see Table Nr 2). During the 1950 to 1975 period, the national income of the Socialist Republic of Romania grew 10.2 times, the national income per inhabitant increased 7.8 times and industrial production by 21 times, while the world average during this period was 3.35 times for gross national product (material), 2.13 times for gross national product per inhabitant and 3.46 times for industrial production.

Table Nr 1

Comparative Data Regarding the Average Annual Rate of Growth of National Income and Industrial Production (1971-1976) (In percent)

	National Income	National Income Per Inhabitant	Industrial Production
Bulgaria	7.6	7.1	8.6
Czechoslovakia	5.3	4.6	6.5
GDR	5.1	5.4	6.4
Yugoslavia	5.5	4.5	7.3
Poland	9.4	8.3	10.3
Romania	11.1	10.1	12.7
Hungary	5.8	5.3	6.0
Soviet Union	5.7	4.6	7.0

[Source: The Statistical Yearbook of the Socialist Republic of Romania, 1978, pp 587, 589]

Table Nr 2

The Dynamics of the Romanian Economy in Comparison with the World Average (In percent)

	1960 1950	1970 1960	1975 1970	1975 1950
National Income				
- Romania	268	223	171	10.2 times
- World Average (material gross national product)	167	167	120	335
National Income per Inhabitant				
- Romania	238	203	163	784
- World Average (material gross national product)	140	139	109	213
Industrial Production				
- Romania	340	334	185	21 times
- World Average	147	190	124	346

[Source: "Economic Trade of the Socialist Republic of Romania with Other Countries," a work published in the "Stefan Gheorghiu" Academy, 1977, p 54]

The constant concern for ensuring a high rate of economic growth is first of all owed to the fact that Romania was at a sufficiently backward level of economic development, a level that had to be exceeded since the creation of a socialist society could not be achieved except on the basis of a powerful economy based on the newest advances of contemporary science and technology. Second, the concern for ensuring a high rate of economic growth is due to the strict need to eliminate our country's backwardness from an economic point of view compared to the other countries with advanced economies. In both cases, taking into consideration the time factor made necessary not just any rate of growth, but a high rate that could ensure the general improvement of the country from an economic point of view in as short a period of time as possible.

The high dynamism of economic growth recorded in our country did not come from itself, did not happen automatically, but is the lawful result of socio-economic and political transformations that took place beginning in August 1944 at the initiative and under the guidance of the Romanian Communist Party. The factors that acted upon economic growth, giving it a high dynamism, are of a political, technical-economic, organizational and social nature.

The decisive factor resides in the fact that all political power belongs to the people who, as full masters of their own destinies, are consciously completing the socialist order, ensuring the concentration and orientation of the material and financial means, as well as the human efforts toward the fundamental directions of economic and social development.

First among the general economic factors is the allocation of a high amount of national income to ensure expanded reproduction. Our party's option for a high rate of investment is based not only on world experience<sup>1</sup>, but also on our own experience. If during the 1956 to 1960 period an average rate of investment of 16.0 percent corresponded to an average growth in national income of 6.9 percent, in the next five year plan, after raising the rate of investment to approximately one-third of the national income, there was also an increase in the average annual rate of growth in the national income, reaching approximately 11 percent. Although the growth of the national income is not owed solely to the increase in the rate of investment, the close tie between the evolution of the two indicators is clear. The same close tie also exists between the evolution of the rate of investment and the consumption fund, showing the justice of our party's policy of distributing the national income for development and consumption. "For our country, which has to bridge an important gap when compared to other countries," emphasized comrade Nicolae Ceausescu a short time after the Ninth RCP Congress, "the consistent carrying out of a broad investment program and the maintenance of a high rate of investment constitute a vital requirement of the first order.

This is the decisive condition upon which the opportunity depends for keeping pace with the competition that is being carried out on a world-wide basis in the field of economic and social development, ensuring raising society's level of civilization, ever better satisfying the material and spiritual needs of the masses and building socialism and communism. ...Under the conditions of the contemporary development of the forces of production, neglecting investment and the growth of national wealth would place Romania on the periphery of economic and technical-scientific progress."<sup>2</sup>

On the basis of increasing the investment fund, to which the amortization fund and the other financial resources of the state were added, investments increased year after year, with the average annual rate of growth of these funds for the period 1951 to 1978 reaching approximately 13 percent. Concomitantly with the growth of the volume of investments, there was a priority orientation of these funds toward the expansion and modernization of fixed production assets, especially for equipping the economy with machinery and tools (see Table Nr 3). This orientation, consistently

Table Nr 3

The Evolution of Investments and Fixed Assets  
(1950 = 100) (In percent and times -x-)

	1955	1960	1965	1970	1975	1976	1977	1978
Volume of Investments	231	439	748	13 x	22 x	24 x	26 x	31 x
Fixed Assets	125	161	223	337	534	588	645	701

[Source: The Statistical Yearbook of the Socialist Republic of Romania, 1978, p 83 and other official documents]

promoted by our party, has in view the fact that, "In the end, the wealth of a people is not found in what it consumes at a given moment, but in the means of production that it has available and in its ability to achieve the largest possible amount of material goods."<sup>3</sup> Starting from this thesis, the rate of investment in the 1981-1985 Five Year Plan will also be 30 percent and the volume of investments will be 1,300 to 1,350 billion lei, of which approximately 85 percent will be allocated to the development of production branches.

In achieving the high rate of economic growth an important contribution has been made by the improvement in the structure of the national economy. Consistently concentrating the principal material means and natural resources in the direction of the socialist modernization of the country transformed the industry in the leading branches of the economy, in 1977 producing within the framework of these branches 65 percent of the social product and 60.7 percent of the country's national income. The contribution of these branches to ensuring the dynamism of economic growth is

conclusively illustrated by the 30 times over growth of newly created value in the 1950 to 1977 period. The industrialization of the country is the decisive factor in the development of the entire economy and in ensuring the independence and sovereignty of the national economy. In the structure of the economy, there has been an increase in the percentage of the basic branches - electric and thermal energy, metallurgy, machine building and chemicals - from 25.8 percent in 1950 to over 55 percent currently, while in the last decade there has been an increase in the sub-branches supporting technical progress - electronics, electrotechnics, production of technological equipment and machine-tools, precision mechanics, petro-chemicals and so forth.

In recent years, in the structure of industry and the national economy overall, new modifications have been imposed tied to the consumption of energy and fuels and raw materials in general, with implications for the rate of economic growth. The criterion of conserving fuel, the secretary general of the party, comrade Nicolae Ceausescu, pointed out right from the first signs of the crisis over energy and certain raw materials, must "...govern the general concept of future development itself for our national economy and the principles upon which we will act to direct the production of material goods in accordance with the realities and requirements of our era."<sup>4</sup>

In the 1981-1985 Five Year Plan, industry will continue to develop at a high rate of eight to nine percent annually, while in some branches, machine building and chemicals, by 10 to 11 percent. Keeping, however, in mind the newly appeared phenomena in international economics and especially the energy and oil crisis which will continue to deepen in the future, a certain restructuring is foreseen in industrial development in the sense of accentuating the development of industrial branches with more reduced levels of fuel and energy consumption, giving up some existing production facilities that are in the category of the larger consumers of oil and energy or restricting them to the absolutely necessary amounts. At the same time, special attention will be given to the development of an energy and fuel base so that in the coming decade Romania will become independent from an energy and fuel point of view.

The harmonious combination of industry with agriculture is a condition of prime importance in ensuring rapid economic growth. With the help of industry, there is an increase in the production capacity of agriculture, a branch which represents a practically inexhaustible source of growth of the country's economic potential. Beginning with this reality, our party feels that agriculture is a basic branch of the national economy and especially after the Ninth Party Congress it established a group of measures designed to lead to the achievement of a modern, intensive and highly productive agriculture based on the use

of the newest advances of science and technology for obtaining ever larger production for the purpose of satisfying under good conditions the consumer demands of the population and the needs of industry and the other current and future needs of our society. The growth of total agricultural production at an average annual rate of 4.6 percent during the 1950 to 1977 period and of 6.9 percent during the 1971 to 1977 period, higher than the world average, shows the contribution of agriculture to economic growth and confirms the justice of our party's agrarian policy.

Keeping in mind the role that agriculture has in satisfying the scientifically based consumer needs for the entire population and in providing increased quantities of raw materials for industry and products for export, the Draft Directives of the 12th Congress of the RCP call for the acceleration of the intensive development process and the modernization process for agriculture as one of the most important priorities of the next five year plan. The quantitative investments made in the previous five year plans corroborated with the measures outlined for the extension of land improvement projects, the development of motor pools for tractors, self-propelled combines, machinery and equipment, the increase in the quality of chemical fertilizers, the provision of seeds and seed stock of superior quality and the improvement of existing varieties and the creation of new ones must be transformed into a new quality that is to be expressed in the substantial growth of vegetable and animal production and in raising the efficiency of agricultural activities to a higher level. The achievement of the transition to a new quality in agriculture depends upon the development of industry itself and the entire national economy and raising the welfare of all the people.

[No 35, 31 Aug 79, pp 11-12]

[Text] Along with the improvement of the structure of the national economy by branches, there has been an orientation towards the improvement of the economy on a territorial basis, based upon the more judicious distribution of the forces of production throughout the country in a unitary concept and a broad perspective. The purpose pursued is the broader use of the country's entire material and human potential - an essential condition for ensuring rapid economy growth at the national level and for harmoniously developing all the areas and units of the country, creating certain equal working and living conditions for all members of society, regardless of their nationality, and raising the general level of civilization of the entire populace.

In accordance with the decisions of the 11th Congress, in the current five year plan each county is to achieve an industrial production of at least 10 billion lei. The next five year plan will mark a new stage in fulfilling the party's program for the balanced development of the country's counties. The principal criterion for evaluating the level of economic development of the counties will be production per inhabitant.

This indicator, totaling the results of activities in industry, agriculture, construction, transportation and services reported per inhabitant in each county, is of a nature to stimulate the development of all fields of activity which correspond to the general policy of our party for the economic and social development of the counties. Total production per inhabitant that is to be achieved in each county will be at least 70,000 lei annually, of which approximately 50,000 lei will be from industrial production, 10,000 lei from agricultural production and 10,000 lei worth from transportation, construction, services and other activities. In the lesser developed counties, there will be rates of growth higher to the average dynamics for the country. In achieving these objectives, considerations are kept in mind regarding economy, efficiency and social factors.

The high rate of economic growth is tied to the rapid introduction to production of the advances of science and technology. In this regard, on the basis of the decisions approved after the Ninth Party Congress, energetic measures were undertaken to develop our own research activities, concomitantly with broadening collaboration with the socialist countries and with other countries, and to integrate science with practice, with this aspect constituting two inseparable facets of man's creative activities.

Beginning with the special significance of the sustained promotion of science and technology in the entire process of socialist construction in our country, the 11th Party Congress established the goal of transforming the current five year plan into the five year plan for fully affirming the technical-scientific revolution in all fields of activity, a fact which led to the intensification of efforts to develop scientific research activities in accordance with the needs of the national economy, the assimilation of a large number of installations, materials and consumer goods, the improvement and modernization of production technologies, the reduction of the research-technological engineering-production cycle and the increase of the economic efficiency of solutions. As a result, new and redesigned products introduced into production in the current five year plan will, in 1980, represent approximately 44 percent of the value of industrial production. On the basis of our own scientific research and technology, in the current five year plan 5,000 types of machinery, equipment and new and redesigned technologies were assimilated, as well as over 3,300 new materials and consumer goods. At the same time, approximately 3,900 modern technologies were introduced. For the five year plan, national research provides approximately 90 percent of the materials newly placed into production, as well as over 90 percent of the new technologies.

The carrying out of the Party's Program for the Creation of a Multilaterally Developed Socialist Society and the Advancement towards Communism requires the continued furthering of scientific research in all sectors of activity, the even closer tying of this research to the specific

demands of material production and economic and social life and the raising of it to the level of the highest advances of scientific and technical thinking on a world scale. Beginning with this objective requirement for the development of our society, the Program-Directive for Scientific Research, Technological Development and the Introduction of Technical Progress in the 1981-1990 Period and the Principal Directions Through the Year 2000 was drawn up. The achievement of the provisions of this Program-Directive will bring about a powerful impetus for science, techniques and new technologies. On this basis, economic activity will benefit from new solutions in different fields, which will contribute to the acceleration of development.

An important factor in ensuring a high rate of economic growth is the development of foreign economic relations, that is, the extension of foreign trade and relations of economic and technical-scientific cooperation with the socialist countries and the countries having economies in transition, as well as with the developed capitalist countries, in other words, with all the countries of the world regardless of their social order. In this regard, it is a significant fact that our country maintains economic relations with over 140 countries compared to 29 in 1950 and foreign trade and cooperation in production with other countries are an important part in the overall Romanian economy.

The sustained development of our economy required the continued growth of foreign trade, with the value of the volume of this trade in 1977 being 26 times greater than in 1950, while the average annual rate of growth in the 1951-1977 period was 12.7 percent. For the 1981 to 1985 period, the volume of foreign trade is foreseen to increase by 50 to 57 percent compared to the level of the current five year plan. In addition to the import of an increased volume of machinery, equipment and installations to modernize material production, our country imports large quantities of raw materials and materials, especially crude oil, iron ore, coke and coking coal, non-ferrous ores and metals, cotton, skins and others. Our country's exports, similarly on the rise, are ever more oriented towards the products of the machine building industry, the chemical industry and the light and food industries. As the secretary general of the party, comrade Nicolae Ceausescu stressed, "...foreign trade activity is a decisive component of the good carrying out of the production process and the raising of the country's level of development and the welfare of the entire nation."<sup>5</sup> In addition to the classical forms of foreign trade, our country is extending new forms of economic, technical and scientific cooperation, including the joint construction of certain economic projects, cooperation in production and in the field of sales, and technical-scientific cooperation on themes and projects of common interest. "We do not have to strive to achieve by ourselves all the products we need, not in metallurgy, not in chemicals and not in other branches. It is certain that without a broad cooperation in production with the socialist countries and companies in the capitalist countries and the developing nations, we will not succeed in ensuring a rapid progress for our economy."<sup>6</sup>

The rate of economic growth in our country is indisolubly tied to and conditioned by labor resources, training and the manner and degree of their use. If in the first years of socialist construction the quantitative evolution of labor resources brought about, to a great degree, economic growth, in the current period, when there is a broad pursuit of the advances of the contemporary technical-scientific revolution in all fields of activity, the quality of human resources and the level of professional education and training are taking on a decisive role. Beginning precisely from the fact that man, as stated in the Program of the Romanian Communist Party, is "...the essential factor of all economic and social development," in our country there has been a permanent concern for the training and improvement of the work force and for the formation of personnel in step with the requirements of modern production.

This concern has been expressed in the spread of training for 10 years, which represents a considerable progress compared to the situation in the past, in the development and modernization of education at all grade levels, in the move to the integration of education with science and production, and in the organization of the national system for improving the professional training of workers in socialist units and the training of all personnel in the economy, in the organs and apparatus of the party and state, in mass organizations, in the press and journalism, and so forth. In the 1978-1979 school year, 5.7 million preschool children and students attended schools at all grades, a number which represents over one-fourth of the country's population, compared to only 2.2 million (13.9 percent) in the 1948-1949 school year. In the 1951 to 1978 period, 3.8 million workers were qualified through short-term courses. In the last 30 years, the national economy received 1.7 million graduates of professional education, 1.9 million graduates from high school, over 500,000 from specialized post-high school technical schools and schools for master craftsmen, and nearly 600,000 personnel with higher studies. In the 1971 to 1975 period, over 10 million workers were included in different forms of improving professional training, while in the 1976 to 1978 period approximately 3.5 million workers participated in improvement programs. Carrying out the economic objectives outlined in the Draft Directives of the 12th RCP Congress amplifies the role and functions of the work force, with the raising of the level of pre-training representing one of the decisive factors for ensuring a high rate of economic growth.

Alongside the training of the work force, an important contribution to economic growth is made by raising the level of use of labor resources, improving the structure of the employed population and ensuring a just correlation between the different categories of personnel in each enterprise. The progress made in this direction is illustrated by the fact that in the 1951 to 1978 period 4.8 million new jobs were created in the national economy. The percent of the population employed in

industry increased from 9.2 percent in 1938 to 33.5 percent in 1978, concomitantly with a decrease in the percent of the population employed in agriculture from 76.4 percent to 32.5 percent in 1978, the first time in Romania's economy when the population employed in industry exceeded that employed in agriculture. The number of workers per 1,000 inhabitants increased from 90 persons in 1938 to 318 persons in 1978. The percent of women in the total number of personnel increased from 27.8 percent at the end of 1965 to 36.2 percent at the end of 1978.

The remarkable achievements made by our people in economic growth are indisolubly tied to the scientific management of the economy and to the scientific nature of our economic policy. In the management of the economy, as in the management of all economic and social life, our party begins with the fact that getting the most out of the superiority of the socialist order does not happen by itself, but requires a sustained activity for the thorough study of the historical realities in each stage and the establishment of the directions of development, of the necessary resources and of the most adequate means of using them.

The party of the working class, in its quality as the vanguard of our entire nation, represents the principal factor in the scientific management of the economy. In accordance with the needs and possibilities of the national economy and the ideals for which it militates, the party is elaborating the political line of economic and social development and is specifying the objectives that are to be achieved and is carrying out a vast organizational and political-ideological activity to bring these about. The leading role of the party is exercised at all levels of leadership and organization, in all enterprises and state and public institutes. Beginning with the principle that socialism is the creation of the masses, our party has worked firmly for the growth of workers' effective participation in the management process, in adopting the most judicious decisions for the proper operation of the production process and in strengthening order, discipline and responsibility at work in all collectives, with this constituting an inseparable component of the continuing development of socialist democracy and an expression of the superiority of our order, which, in practice, ensures the leadership of the state and public affairs by the people themself.

The principal instrument through which our party carries out the unitary management of the economy is the sole national plan. Throughout the years, and especially after the Ninth Party Congress, the planning activity was improved in accordance with the level of development of the production forces in order to better correspond to the developmental stages of the economy. The planning activity is based upon the consistent application of the principle of democratic centralism and by blending the general guidance of the economy with economic and financial autonomy, self-administration of the enterprises and worker self-management. The measures

taken by the party regarding the growth of the autonomy of the enterprises ensure, in practice, the more and more intense participation of the workers in finding and putting to use the existing reserves in units and contribute to increasing their responsibility in achieving their tasks. At the same time, the principle of collective leadership has been rigorously applied.

At the initiative and under the direct leadership of comrade Nicolae Ceausescu, in recent years an appropriate institutional framework has been created which allows for workers in all fields to effectively participate in the formation and approval of decisions and in the establishment of measures for the proper carrying out of economic and social activities. The broadening of socialist democracy has led to the more intense participation of workers in the formulation of plan proposals and in the discovery of reserves available to the economic units. At the same time, this led to the identification of new opportunities for supplementing the provisions and for intensifying the expanded reproduction and more accentuated growth of well-being.

The fundamental direction of improving planning activities refers to balancing current planning with future planning and to broadening the encompassing sphere of the national plan so as not to limit it to the economic facet, but to include to an equal degree all facets of social life and all compartments of society. At the same time, the elaboration of a tridimensional plan, within which the tasks of the branches, as well as those of the enterprises, ministries, central and so forth are coordinated and organically combined with those of a territorial nature, ensures a more efficient joining of efforts and the harmonious, balanced development of the national economy.

At the initiative and with the decisive contribution of comrade Nicolae Ceausescu, the spread of a new economic and financial mechanism was ensured, promoting new, advanced and revolutionary principles, forms and methods in the organization, management and operation of economic and social life. The measures for introducing the new economic-financial mechanism and the indicators of net and physical production as basic indicators, the spread of self-management and economic-financial self-administration for enterprises, the budget of incomes and expenditures for each economic unit and so forth have the purpose of creating conditions for the active, unrestricted expression of the initiative and actions of all collective organs and workers collectives in the direction of using and managing means with a maximum of efficiency.

Our party leadership adopted, at the initiative and with the decisive contribution of comrade Nicolae Ceausescu, important measures for the improvement of agriculture, too. In this sense, the plenum of the RCP Central Committee of 1 February 1979, adopted a group of measures, principles and forms of organization and leadership corresponding to the

requirements of the current stage of development, through which to ensure the framework necessary for the introduction of self-management and self-administration in all agricultural units and for the promotion of the new economic-financial mechanism in agriculture. The measures adopted have at the base economic, organizational and social principles of great practical and principled significance: ensuring the unified management of all sectors of agriculture, at all its organizational levels; accentuating the process of concentrating and integrating production and the process of unit and subunit specialization, as premises for the modernization of agriculture and the growth of agricultural production efficiency; rationally using in a unified manner the technical-material base made available to agriculture; accentuating the process of integrating research and education with production for the purpose of more rapidly introducing technical progress and the advances of science in the practices of agricultural units; increasing the role and responsibilities of specialists for establishing and differentially applying the entire complex of agro-zootechnical projects; improving and updating the training of specialists and all workers in agriculture in accordance with the demands of modernizing agricultural production and the importance tasks facing agriculture.

The placing of the entire system of organization, management and planning of agriculture on the basis of these principles and the establishment of structures, components, attributes and responsibilities of the unique agroindustrial councils in strict accordance with these principles found its basis in the demands raised by the progress of agriculture in the current stage and responds to the objective trends of the evolution of social relations in this branch in the process of building a multilaterally developed socialist society and advancing our country toward communism.

As is shown in documents, the party does not feel that through the measures adopted the requirements were exhausted that call for the improvement of the operation of our society in its evolution toward the higher phase - communism - and the furthering of economic-social democracy in this process. The improvement of the mechanism of economic-social life in step with the new demands of progress and the broadening of democracy constitute, in the view of the party, an objective necessity and a permanent requirement. The consistent application of the measures for improvement ensures a proper organizational framework for the rapid growth of production forces and the high rate of development of the economy.

#### FOOTNOTES

1. The studies carried out under the aegis of the United Nations led to the conclusion that in order to obtain an average rate of growth in gross national product of four to six percent it is necessary to have an average investment rate of 20 percent, for average rates of seven to eight percent 30 percent, while for higher rates of 9 to 10 percent or greater, a rate of 30 to 40 percent (A. Carter, W. Leontiev, Peter Petri: "The Future of the World Economy," a study by the United Nations, the Scientific and Encyclopedic Publishing House, 1977, p 85). Developed nations have allocated for development important parts of the national income, from the gross national product. Thus, in 1966, the percent of investment in the national income represented approximately 26 percent in the Soviet Union and over 20 percent in the GDR. The percent of investments in the gross national product in 1965 was 17 percent in the United States, 18 percent in England, 22 percent in France, 19 percent in Italy, 27 percent in the FRG and over 30 percent in Japan. In 1974, the rate of investment was 20 percent in the Soviet Union, 22.8 percent in the GDR and 28.6 percent in Czechoslovakia. According to the data published by the United Nations, in the same year Belgium allocated 22.7 percent, France 27.7 percent, the FRG 26.5 percent, Japan 37.5 percent and the United States 19.2 percent from their gross national product for the growth of production.
2. Nicolae Ceausescu, "Romania On the Path of Completing Socialist Construction," Vol 2, Bucharest, the Political Publishing House, 1968, pp 573-574.
3. Nicolae Ceausescu, "Romania On the Path of Building a Multilaterally Developed Socialist Society," Vol 7, Bucharest, the Political Publishing House, 1973, p 482.
4. Nicolae Ceausescu, "Romania On the Path of Building a Multilaterally Developed Socialist Society," Vol 9, the Political Publishing House, 1974, p 619.
5. Nicolae Ceausescu, "Romania On the Path of Building a Multilaterally Developed Socialist Society," Vol 9, p 635.
6. Nicolae Ceausescu, op. cit., Vol 5, pp 307-309.

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## HYDROELECTRIC POWER POTENTIAL ASSESSED

Bucharest REVISTA ECONOMICA in Romanian No 35, 31 Aug 79 pp 7-8, 23

[Article by Alexandru Cogalniceanu, of the Institute for Hydroelectric Studies and Research]

[Text] In order to fulfill the extremely important tasks necessary for Romania to become independent from the standpoint of fuels and energy during the next decade, efforts are directed toward the development of the energy basis, concurrent with a reduction of at least 21-23 percent in the indicator of primary energy consumption in industry, and with an increase of 32-34 percent in the indicator of value derived from raw materials and energy. For this purpose, particular emphasis has been placed on the intensive use of national resources; within this framework, significant attention has been devoted to a better utilization of the country's hydroelectric potential, along with a greater use of solid fuels, the completion of the program for nuclear plant construction, and the use of new forms of energy -- solar, geothermal, wind, and biogases.

### Available Resources

The hydroelectric potential represents the annual production capacity of all hydroelectric plants which can be built on the nation's waterways. A study of the possibilities existing on the country's major rivers, which provides for more than 800 hydroelectric plants of power greater than 1.3 MW, as well as an overall evaluation of micro-hydroelectric plants, result in a total hydroelectric potential of 40 billion kWh/year for Romania.

The magnitude of this potential depends on natural conditions and in particular on rainfall, its distribution in time (both during one year and from one year to another), the percentage of rainfall which drains to form the waterway network, altitude, and the upstream rivers which bring water from other countries. As can be seen from table 1, which presents comparative data on the rainfall and drainage of Romania and some European countries, Romania's rainfall and drainage are much smaller than those of such countries as Switzerland, Norway, Austria, and Italy, and if we consider only the volume of water formed on our own territory, the specific

Table 1. Drainage waters and developable technical hydroelectric power potential for some European countries.

Tabelul nr. 1

Apela de se baza pe potențialul hidroenergetic urbanizabil al unei sări din Europa

	(A) Volumul mediu anual al apelor de surgere					(B) Potențial hidroenergetic specific				
	(C) Precipitație anuală (mm/year)	(D) Anul de surge precip. (mm/year)	(E) Format pe teritoriul țării (billion cubic meters)	(F) Procent din amonte (%)	(G) Total (billion cubic meters)	(H) Volumul specific (billion cubic meters)	(I) Total (TWh/ani)	(J) MWh/km <sup>2</sup>	(K) kWh/inhabitant	
R.S. România (M)	780	280	48	133	133	9 100 (2 830)	43	254,5	1 034	
Austria (N)	1 130	660	35	51	51	12 000 (7 200)	61,8	722,1	8 158	
R.S. Cehoslovacia (O)	700	220	30	60	60	8 000 (2 000)	12,0	92,5	860	
Svizzera (P)	1 500	1 000	49	33	33	7 500 (6 200)	31,1	382	5 024	
Franta (Q)	750	300	263	40	263	8 000 (1 200)	100,0	102,0	1 940	
R.D. Germania (R)	600	150	13	33	23	1 500 (900)	2,0	12,0	120	
Italia (S)	1 000	613	500	3	500	2 000 (2 000)	91,3	324,1	1 210	
R.S.F. Iugoslavia (T)	973	430	110	113	233	10 000 (5 100)	44,8	250	3 014	
R.P. Ungaria (U)	640	170	8	113	120	11 200 (4 672)	7,3	90,5	710	

— TWh = miliarde kWh.

(L) \*) Prima cifra se referă la volumul total, iar cea din paranteze la volumul specific.

- Key:
- (A) Average annual volume of drainage water
  - (B) Specific hydroelectric power potential
  - (C) Average rainfall (mm/year)
  - (D) Drainage water from rainfall (mm/year)
  - (E) Formed on national territory (billion cubic meters)
  - (F) From upstream (billion cubic meters)
  - (G) Total (billion cubic meters)
  - (H) Specific volume\*) (billion cubic meters)
  - (I) Total (billion kWh)
  - (J) MWh/square km
  - (K) kWh/inhabitant
  - (L) \*) The first figure refers to total volume, and the one in parentheses to specific volume
  - (M) Romania
  - (N) Austria
  - (O) Czechoslovakia
  - (P) Switzerland
  - (Q) France
  - (R) East Germany
  - (S) Italy
  - (T) Yugoslavia
  - (U) Hungary

volume per inhabitant is smaller than that of other countries. Added to this is the hydrology of Romania's rivers, which undergoes significant variations: for instance, more than 50 percent of the annual volume of the rivers' water flows during three months in the spring, with reduced volumes during the winter, when electric power demand is at a maximum, and during the summer, when other demands exist for the water.

Also notable is the fact that the volume of water brought by the Danube from upstream is nearly 4 times larger than the volume of water formed on Romania's territory. Moreover, the Danube is a border river, which limits its possible area of influence, and the removal of water for other purposes is determined by the need to assure its navigability.

However, hydroelectric potential is proportional to the product of flow and altitude. Not only are Romania's rainfall and drainage of the magnitudes indicated above, but our country's altitudes are also relatively modest, which limits the available drops. For these reasons, Romania's hydroelectric potential per square km or per inhabitant is close to the European average, but significantly lower than that of such other countries as Austria, Switzerland, Norway, and Italy. The unit hydroelectric potential, that is the theoretical average power -- in kw -- which could be obtained by developing one km of river, not considering the losses incurred in the transformation of hydraulic energy into electricity, is proportional to the product of the flow and drop of various river sectors; large values are obtained where this product is high, meaning on the strong slopes of rivers with significant flows. Maximum values for the Danube are found at Portile de Fier, and for interior rivers, on the Lotru, at the narrows and the central portion of the Olt, on the Bistrita, the Arges, on some affluents of the Mures (Riul Mare, Sebes), on the Somesul Cald, and so on. In principle, the zones in which the hydroelectric potential is the most concentrated are the most economical ones to use, making it possible to obtain large amounts of power and energy from smaller hydrotechnical projects (dams, spillways, and so on), a fact which is directly reflected in the investments needed for these projects.

#### Development of the hydroelectric Potential

The systematic exploitation of the nation's hydroelectric potential began in 1950 with the first ten-year electrification plan. At that time, the utilization of hydraulic energy was insignificant (the power of all our hydroelectric plants totaled 60 Mk, and their average annual production capability was 145 kWh per year), but in the period that followed, the country's hydroelectric power potential increased continuously (table 2). Until 1965, the rate of exploitation of this potential was slow. During this period, the small investment funds allocated to hydroelectric power, and the rapid increase in electric consumption -- which doubled every five years or less -- reduced the rate of development of this field. Subsequently, due to the development of the electric power system, the interconnection of various regions, and the creation of the national system, the power produced by hydroelectric plants became much higher (figure 1).

Table 2. Power and energy of hydroelectric plants built during the 1950-1980 period.

Perioada	Tabelul nr. 2 Puterea și energia hidrocentralelor realizate în perioada 1950-1980					
	1950	1951-1960	1961-1970	1971-1975	1976-1980	
Număr hidrocentrale - (A)	- (A)	8	9	12	34	27
Putere nou instalată (MW) - (B)	- (B)	111,5	220	781	1 483,3	1 963,2
Produsă medie a hidrocentralelor noi (GWh/an) - (C)	- (C)	361	527	2 019	5 821	2 534,1
Putere totală a hidrocentralelor în final perioadei (MW)* - (D)	- (D)	68	219	481	1 109	2 622
Putere medie la final perioadei (GWh/an) - (E)	- (E)	113	480	1 207	3 716	11 296,7

\* ) înințe seama de casarea unor grupuri vecchi.

- Key:
- (A) Number of hydroelectric plants
  - (B) Newly installed power (MW)
  - (C) Average production of new hydroelectric plants (GWh/year)
  - (D) Total power of hydroelectric plants at the end of the period (MW)\*
  - (E) Average period at the end of the period (GWh/year)
- \* ) Considering the removal from service of older generators

Graficul nr. 1

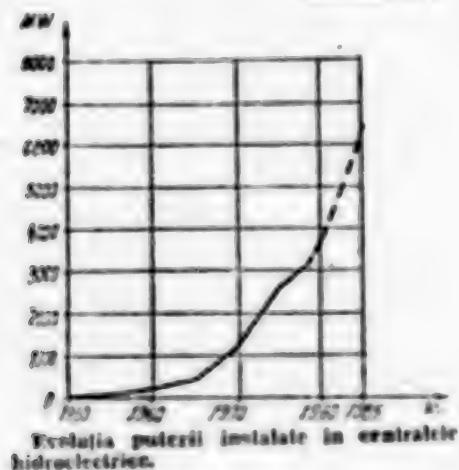


Figure 1. Installed power in hydroelectric plants.

The average power and production of the new hydroelectric plants reached a peak during the 1966-1975 period as a result of one of the biggest hydroelectric plants which could be built in the country, namely Portile de Fier I and Lotru.

#### Exploitation Strategy

The exploitation of Romania's hydroelectric power potential has consistently sought the following goals:

Maximum exploitation of the hydroelectric energy potential through integral preparation of waterways, and the most complete possible utilization of the water volume in rivers by reducing overflows;

Comprehensive exploitation of water resources in rivers, so that in addition to power production, they will provide the water needed for other uses, and in particular for drinking and industry, irrigations, as well as reduce peak flows and floods;

The most economic development of the hydroelectric potential, by concentrating the potential available in mountain rivers through flow diversions from neighboring basins. In addition, the potential of rivers was concentrated into a smaller number of more powerful hydroelectric plants, by increasing the developed drop through adduction channels and long runs. Hydroelectric plants on the central and lower portions of rivers were sized for equal flows, and the drop of other plants was frequently replicated, making it possible to mass produce a limited range of equipment;

Optimum development of the potential through the use of better operation capabilities for hydroelectric plants, which can start and stop in a short time, sustain a high generator loading speed, and are highly efficient under partial load. Because of these qualities, hydroelectric plants were designed to cover the variable portion of electricity consumption, peak loads, enabling the large thermoelectric plants to operate at constant, basic rates, with reduced specific fuel consumptions.

The application of these considerations is obvious on the majority of the rivers that have been or are being developed, such as Bistrita, Arges, Somes, Lotru, Sebes, Riu Mare, and so on. Accumulation lakes have been formed on the higher reaches of these rivers to regulate flows for power production and other uses, as well as to attenuate high waters. The flows of neighboring rivers are diverted into these lakes, with many secondary channels being built for this purpose. Long major channels are built to increase drops, and in some cases the generator rooms are built underground, with runs completing the development.

#### Priorities in Hydroelectric Power Development

A greater exploitation of hydraulic resources is envisaged in order to obtain energy independence during the next decade through the intensive use of national energy resources. The data cited above indicates that nearly 30 percent of the hydroelectric potential will be used in 1980 as compared to practically none in 1950. As a result of intensified development, 45 percent of the hydraulic resources will be used in 1985, 65 percent in 1990, and all of them in the year 2000 (figure 2). Consequently, the electricity produced in hydroelectric plants will increase from 17.6 percent in 1980 to 20 percent in 1985, and to 24 percent in 1990 (figure 3 and table 3).

Graficul nr. 2

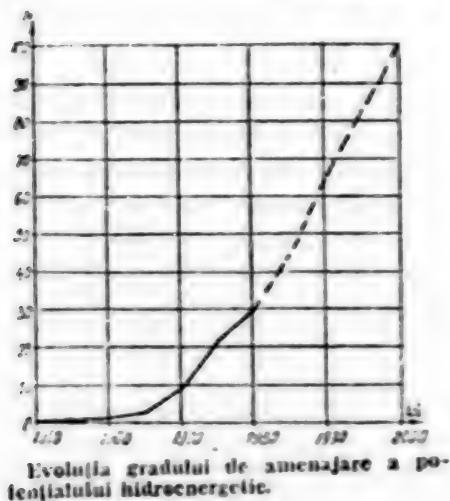


Figure 2. Development of hydroelectric power potential.

Graficul nr. 3

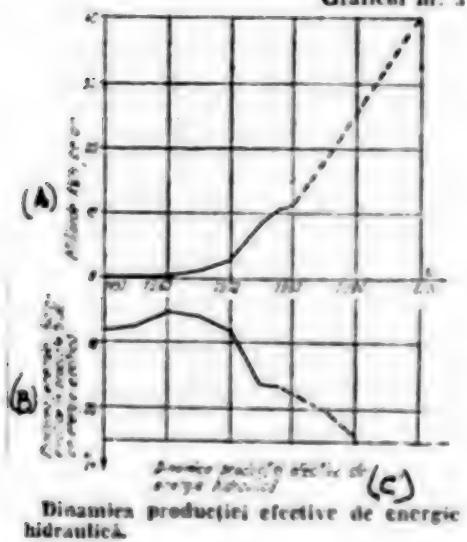


Figure 3. Effective production of hydraulic energy.

- Key:
- (A) Billion kWh per year
  - (B) Percent of hydroelectric power in total electric power production
  - (C) Effective production of hydraulic energy

Table 3. Structure of electric power production.

	1950	1960	1985	1990
Electric power production (billion kWh)	2,113	74	88-90	105-110
Structure of electric power production (percent)	100	100	100	100
Hydroelectric	8	17.6	20	24
Coal and combustible shale	19.8*)	40	55	44
hydrocarbons	70.1	39.7	20	5-4
Nuclear power	--	--	--	17-18
Solar, other new energy sources, and recovered energy resources	2.1**)	2.7	5	10

\*) Of which 6.1 percent high quality coal

\*\*) Particularly wood and wood wastes

The world energy crisis is a fundamental problem in mankind's development, and demands that our country continue to follow the path it has followed until now in reducing the utilization of hydrocarbons, deriving more value from coals, combustible shale, and hydroelectric energy, adopting nuclear energy at a more rapid rate after 1985, and increasingly moving toward new, unconventional sources of energy (solar, wind, geothermal, tidal, and others).

The utilization of hydroelectric energy represents a fundamental fuel savings of 4.5 million tons of conventional fuel (tcc) in 1980 and nearly 7 and 10 million tcc in 1985 and 1990, respectively. These savings are primarily in terms of hydrocarbons, which can be exploited much better in the petrochemical industry, where they can produce a wide variety of valuable goods. As a result, it is expected that 6700-6900 MW will be made available during the next five-year plan, 38 percent of which, or 2600-2700 MW, in hydroelectric plants.

The Danube, one of the country's major sources of energy will continue to be developed, placing in operation the hydroelectric plant at Portile de Fier II-Gruia, which is being built jointly with Yugoslavia, and the one at Turnu Magurele-Nicopole, which is being built together with Bulgaria; in addition, 2000 MW of hydroelectric plants will be built on interior rivers. The development of the rivers Lotru, Sebes, and Riu Mare-Retezat will be completed, the development of the Olt will be continued, and work will begin at many other hydrographic basins.

Hydroelectric plants will be designed to continue to cover the variable portion of load curves, which becomes more necessary than ever since thermoelectric plants fired with lignite and combustible shale, as well as nuclear power plants, are limited in their ability to change their loading in response to consumer demand.

The provisions of the Directives establish great tasks for the development of hydroelectric power. Thus, during the 1981-1985 five-year plan, it will be necessary to place in operation hydroelectric plants whose production will equal more than one half of all that was achieved during the 30 years between 1951 and 1980. The complexity of the problems that remain to be solved can be appreciated when one considers that the most economic plants for rivers or river sectors, plants that are powerful because their potential is concentrated, have in general already been built. The potential which remains to be developed will require the construction of a large number of hydroelectric plants of smaller power. The exploitation of a less concentrated hydroelectric potential requires larger amounts of work (embankments, concrete, equipment, and so on) per kW or kWh produced, which in turn is reflected in larger investments. Hence the obligation of all those who collaborate in the construction of hydroelectric plants, to conduct studies and research, to design and adopt standardized construction methods and equipment, to introduce new technologies and materials, and to intensify their efforts toward reducing investments, the consumption of materials that are in short supply, fuels, and energy, so as to complete economic and reliable projects in the shortest possible time.

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MINISTER DISCUSSES INCREASING MINING ACTIVITY

Bucharest REVISTA ECONOMICA in Romanian No 35, 31 Aug 79 pp 4-6

[Article by Vasile Patilinet minister of mines, petroleum, and geology  
"Great Role of Extractive Industry in Supplying Raw Materials and Fuels  
for the Needs of the National Economy"]

[Text] In the 35 years since the revolution for social, national, anti-fascist, and anti-imperialist liberation, the enthusiastic labor of the Romanian people, under the wise and far-sighted leadership of the RCP, has increased the nation's production forces at a very strong rate, has modernized the technical and material basis of our entire economy, and has rapidly increased the national wealth and the national income. Today, our country's industrial force is 42 times larger than in 1938, and its agricultural production is nearly 3.5 times higher than in 1950. The continued growth of the production forces and of the national income has created the foundation for our party and state to fulfill a vast program for raising the standard of living of the entire population by assuring higher incomes for all categories of workers and by increasingly satisfying their needs.

A special contribution to the development of our national economy was made by the extractive industry, producer of raw materials and energy sources, whose development has been an important objective of our party's economic policy. Through its clear and consistent perception of worldwide trends, the party leadership and Nicolae Ceausescu personally, anticipated the energy crisis which affected the world's economy in 1973. Even at the beginning of this decade, when many countries in the world still consumed energy under the euphoria of cheap hydrocarbons, the secretary general of our party -- assessing the risk of excessive and unlimited use of oil and natural gas, known to be localized and non-renewable resources -- asked for a sustained conservation of valuable energy resources, and offered guidelines for the development of inferior fuels, reserves of which exist in our country. At the same time, considering that Romania has limited reserves of ores rich in useful resources, our party and state have indicated the need for exploiting deposits with reduced metal content, and for the introduction of strict metal conservation.

Table 1. Net coal production (\$ with respect to 1970).

	1975	1978	1980 (plan)
Net total coal	132.0	142.5	265.0
1. Bituminous coal	114.3	115.9	146.9
For coke and semi-coke	(141.3)	(187.6)	(274.2)
2. Lignite and brown coal	139.4	154.6	318.5
Total lignite	(142.3)	(157.8)	(329.5)
Open pit lignite	(175.5)	(192.6)	(479.0)

Acting in this spirit, a number of special programs were formulated and approved by the extractive industry, some of these being the drilling and exploitation of very deep wells, increasing final recovery factors in crude oil deposits, exploration of the Black Sea continental shelf, equipping and mechanizing coal mines and pits, and exploiting wastes and secondary resources in the mining sector.

#### Accelerating Production Growth by Promoting Technologic Progress

Between 1970 and 1980, the development of the mining and oil sector, and the most rational management of the energy resources available in our national economy, have been some of the actions taken to assure the energy basis for our country's needs. Electricity generation by coal combustion increased from 27.8 percent in 1975 to 40 percent in 1980, with a consequent sustained growth in the production of coal (table 1).

Coal extraction in 1980 will be nearly 2.7 times as large as in 1970, with a most spectacular increase of 3.3-fold for lignite as a whole, and of 4.7-fold for open pit lignite. In order to support this increase, a significant number of new mines were opened during the present decade, and the capabilities of existing ones were expanded, particularly in the Oltenia and Valea Jiului basins, where the mechanization program has introduced the most modern technology.

The production of crude oil and gas has evolved as a function of the volume of discovered resources and as a result of a gradual increase in their level of exploitation. Because steps were taken to obtain a greater recovery of crude oil from deposits, the final recovery factor increased from 30.5 percent in 1975 to 31.5 percent in 1979 wherever these measures were applied. Between 1971 and 1978 a number of 53 deposits were opened to maintain crude oil production at levels consistent with the volume and quality of reserves existing in Romania, with 34 of these deposits having a low industrial potential, and being located for the most part at old structures under exploitation.

Table 2. Production of extracted and processed copper and complex ores (% with respect to 1970).

	1975	1978	1980 (plan)
Copper ores	173.8	180.5	331.5
Complex ores	131.7	160.0	180.4

Table 3. Production of major non-metallic products (% with respect to 1970).

	1975	1978	1980 (plan)
Kaolin	169.1	192.7	236.4
Bentonite	198.5	275.7	280.0
Chalk	210.5	237.7	307.0
Dolomite	174.3	254.9	260.0
Limestone	154.8	222.0	236.0
Quartz sand	201.3	227.8	260.0
Salt	133.9	165.6	176.4

In the non-ferrous sector, exploitation was improved for copper-bearing ores and for complex, poor, and poorly exploitable ores. In order to maintain the same level of metal production in spite of decreasing geologic reserves, new deposits were placed in exploitation after 1970 at Rodna-Valea Blaznei, Tarna Mare-Turt, Gura Baii, and Dealul Bucatii, and new processing units were built at Rodna, Baia Borsa, and Sasca. This has made it possible to increase the production of extracted and processed ores, as shown in table 2.

The production of non-metallic substances and salt has also increased steadily (table 3) through the development or opening of new facilities at Aghires and Marghita for kaolin, Voslobeni for dolomite, Mahmudia and Poiana Aiudului for limestone, and Dealul Cerna for quartz, as well as on the basis of progress achieved in modernizing installations and in improving processing technologies.

The range of non-metallic mineral substances was also expanded concurrently with the development of production; at the present time, this range consists of 126 products as compared to 80 in 1970, thereby making it possible to use domestic resources to meet various needs for raw and other materials in metallurgy, chemistry, paper manufacturing, construction materials, and so on.

The years 1979 and 1980 are certainly decisive ones for the extractive industry, both in completing the current five-year plan, and in preparing the necessary conditions for the successful entry into the next one. The coal plan is being fulfilled under good conditions at the bituminous coal mines in Valea Jiului as well as at the other mining units in the

country. However some shortcomings still exist at units in the Oltenia basin, where production is behind planned levels even though during the past period of 1979 it has been 22 percent higher than the production of the corresponding period of last year. We were not able to apply the important measures established by the party leadership in all the exploitations of this basin, and as a result, the degree of utilization of equipment is still low.

As the secretary general of the party has pointed out during his working visits to the Oltenia and Valea Jiului coal basins, many of these shortcomings would not have existed and we would have had much more coal and much more energy, if more responsibility and decisiveness had been demonstrated in solving the various problems that did arise. The Ministry of Mines, Petroleum, and Geology will take all the measures that impose themselves and will intensify its efforts to eliminate weaknesses, and to create increasingly good exploitation conditions, by expanding mechanization and promoting advanced technologies. Particular stress will be placed on increasing the utilization factor of equipment and installations -- which as rapidly as possible will have to represent at least 80 percent of the available time for excavation-transportation-dumping equipment at open pits, and 80-85 percent of the available time for basic underground equipment -- of cutting and advancement combines, and of mechanized mining and support machinery. All the forces available to the ministry are concentrated on this goal.

#### 1981-1985 -- Strong Development of Raw Materials and Energy Basis

The draft for the Directives of the 12th Congress of the RCP regarding Romania's socioeconomic development during the 1981-1985 five-year plan and long-range orientations up to 1990, stipulates serious tasks for the extractive industry. The major objectives for this sector, and those on which all activities will have to be concentrated, are in brief, the following:

Intensified and more thorough geologic research in Romania and in the Black Sea continental shelf, aimed at discovering new reserves of oil, gas, coal, bituminous shale (combustible), ferrous and non-ferrous ores, rare and dispersed metals, as well as non-metallic and other useful substances;

Increased extraction of coal and development of bituminous shale production; production development for iron, non-ferrous metals, and non-metallic substances; assuring the national supply of oil and natural gas while maintaining adequate geologic reserves;

Research and development of modern technologies and methods for intensive exploitation of all useful mineral reserves, comprehensive exploitation of ferrous, non-ferrous, and low-yield ores, as well as recovery and greater utilization of useful substances derived from exploited ores.

## New Aspects of Geologic Research

The directives for Romania's geologic projects are a large scale continuation of our party and state's scientific and realistic policy for a lasting basis of raw materials and energy resources. In order to find new resources, activities will be conducted on the basis of a vast program of geologic and geophysical research, formulated for the first time in our country. More than 41 billion lei have been allocated to geologic research during the 1981-1985 five-year plan, which is 1.5-1.6 times more than the funds allowed for the current five-year plan; 50 percent of these funds will be spent to discover new hydrocarbon reserves.

The basic demands made on Romania's geologic studies in the area of oil and gas are: on land, to intensify the investigation of less explored zones and locations, primarily by increasing drilling depths from 3500 m to 8000-10000 m and by reaching less accessible zones; and on sea, to accelerate searches on the Black Sea continental shelf. At the same time, new methods of investigation will be used to continue searches in explored zones and depth ranges down to 3500 m, in order to obtain fuller knowledge of the potential of these zones, and to discover deposits in complex geologic structures which could not be identified by means of methods used until now. In order to intensify this search, both on the surface and in depth, geologic drilling during the 1981-1985 five-year plan will be nearly 1.3 times more intensive than during the current five-year plan; the proportion of very deep drilling will increase from about 10.5 percent in 1978 to more than 40 percent in 1980.

For lignite and brown coal, geologic projects will be intensified in the Gorj (Rovinari), Vilcea, and Mehedinți basins, in the sub-Carpathian zone of Muntenia and Moldova, in the southeast and northwest portions of Transylvania, and in the Banat basins. For bituminous coal, the search will be oriented toward the discovery of new reserves and a more thorough recovery of reserves in Valea Jiului, including in surface facility protection zones. In addition, for the large scale exploitation of bituminous shale deposits, studies will be accelerated through prospecting and exploration of zones in Banat which contain these resources.

## Greater Extraction of Solid Fuels

The deepening world energy crisis, the shortage of hydrocarbons, the continuing increased demand for primary fuels, and the need for a superior exploitation of existing hydrocarbons, have led the Directives draft to stipulate changes in the structure of fuels used to generate electricity, as a result of which the electric power produced with coal and bituminous shale will increase to 60 percent in 1985, as compared to 40 percent in 1980. The draft also stipulates a significant increase in the extraction of solid fuels. The total production of coal planned for 1985 will be 85-88.3 million tons, which is 3 times higher than that of 1978; priority will be given to the production of lignite, which will increase more than 4-fold during this period.

In order to increase the proportion of solid fuels delivered to thermoelectric power plants, the bituminous shale (combustible) available in our country will be used during the 1981-1985 five-year plan by exploiting the deposits of Anina and Doman, which as a first step will supply the fuel necessary for a 990 MW thermoelectric power plant.

Particular attention will also be devoted to the production of bituminous coal for coke and semi-coke, which in 1985 will be 2.3 times higher than in 1978 in order to better satisfy the demands of the steel industry. In addition to the opening of new production capabilities, the basis for this increased coal supply will be the sustained and continued endowment of mines and open pits with high efficiency equipment and installations. The mechanization of mining operations will increase concurrently with this greater endowment. In 1985 for instance, nearly 4 times more coal than in 1978 will be extracted from tunnels supported by complex mechanized systems, mechanized long-wall cutting and loading of coal will be 3.6 times higher, and mechanized excavation with advancement combines in coal and waste will be 2.6 times higher. In open pits, the extraction of lignite by means of integral comprehensive mechanization techniques, will increase by about 4.2 times during the same period.

In order to improve the quality of the delivered coal, a large amount of technical research is envisaged for coal preparation and for the utilization of waste derived from this preparation. Research will also be accelerated to finalize the technology for exploiting the ash resulting from coal burning, by extracting useful substances from these ashes (iron, alumina, precious metals), and by using them as additives in cement, masonry, road construction, dikes, embankments, river bed control, and so on.

As Nicolae Ceausescu has pointed out during his recent work visits to the Gorj and Valea Jiului mining basins, the problem of coal and of thermoelectric power plants which use coal, is the number one problem of Romania's energy development during the next five-year plan. The production of coal is essential for the period which is to follow. We are even considering advancing beyond the plan during the 1981-1985 five-year plan, to the extent to which the necessary equipment becomes available and is appropriately used. Given the need to reduce importations, at least 50 percent of the cokable coal needed by 1990 for metallurgy will have to be supplied from domestic production.

In order to achieve these high rates of development, which become points of honor and of great responsibility, workers' collectives in enterprises, geologic researchers, research and design institutes, mining combines, and the ministry, have immediately started to examine and establish solutions and measures for each mining field, which will assure the best attainment of these goals.

## National, Economic Exploitation of Oil and Gas Deposits

In 1985, the extraction of oil will amount to 12.5 million tons, and that of natural gas to 26.5 billion cubic meters. The annual extraction levels for these products during the next five-year plan have been established taking into consideration the need to maintain a suitable level of reserves while continuing to restrict their utilization. In addition to the opening of new deposits, the endowment of these sectors will be continued and extraction equipment will be modernized. The system for centralized control of well operations will be expanded, and automatic installations will begin to be used to collect, separate, measure, and transport crude oil and gases in a closed system so as to reduce losses. Moreover, the use of hydraulic and submersible extraction pumps will be expanded, and the range of chemical products for more efficient treatment will be extended and diversified in order to increase flows at wells under exploitation.

An important objective in oil extraction is the continued increase of the final recovery factor of oil in deposits, which will go from 31.5 percent in 1979 to 37 percent in 1986, and to about 40 percent in the last decade of the century, at deposits where the suitable technology can be applied. Extensive research has identified and tested new methods for increasing the oil recovery from deposits; some of these are underground combustion, cyclic and continuous injection of steam, injection of viscous water with polymers, injection of micellar solutions, surface tension activators and alkaline solutions, and so on. For the first time, a project has been formulated to penetrate by means of mining operations, to productive strata at depths below 500 m. During the 1981-1985 period, the expand' use of methods for increased recovery will create 70-71 percent of the increase in geologic resources, and nearly 20-22 percent of the oil production for the entire period, as compared to 55-57 percent and 14-16 percent, respectively, during the current five-year plan.

## Exploitation of Useful Substances from Low-Yield Ores and Other Sources

In the non-ferrous ore sector, the Directives draft concerns itself with the mass exploitation of copper ores with low metal content. For instance, it envisages the exploitation of copper-poor ores at Moldova Noua (banatite), Rosia Poeni, Valea Morii-Baia de Arama, whose copper content of 0.25 percent is 2-6 times lower than that of ores exploited until now. New facilities for extracting complex ores will also be placed in operation. These new capabilities will be provided with equipment at the level of world technology, both in terms of mechanical installations for exploitation operations, and in terms of high capacity machinery for processing copper ores; these will be able to handle 7000-8000 tons/day, as compared to the existing ones whose capacities are 500-1000 tons/day.

Because 15-20 years ago processing techniques were less advanced and the processed ores had a higher metal content, the wastes from these processing installations, which are now stored in dumps and decanting ponds, still contain various useful elements in exploitable quantities. Based on the

progress made in recent years in processing technologies, and on the experience gained from pilot plants and industrial installations, useful substances in wastes have started to be recovered and will increasingly continue to be recovered during the next five-year plan. By 1985, this activity will have recovered 58,000 tons of iron, 4000 tons of non-ferrous metals in lead equivalent, 2500 tons of manganese dioxide, 80 tons of tungsten, 130,000 tons of dolomite, and 1300 tons of sulfur, whose combined value will be 4 times higher than that of the substances recovered during 1978.

A technique has been perfected for collecting barium oxide from the gases released during its drying, and very good results have been obtained from experiments conducted to collect lead and zinc from the gases released by the metallurgical ovens at the Firiza plant, gases which had been dispersed in the atmosphere. This lead and zinc collection technique will be applied at the other non-ferrous metallurgy plants. In the non-ferrous metals extraction sector, new facilities for concentrate processing will be placed in operation at Moldova Noua and Copsa Mica, and after 1985, a new copper metallurgy unit will be opened at Abrud-Zlatna; all these plants will be equipped with the most advanced world technologies.

Production will continue to be developed in the non-metallic sector; sulfur production will be 8.7 times higher in 1985 than in 1980, and 1.7 times higher for kaolin, 1.4 times for dolomite, 1.3 times for clay, and 1.5 times for limestone, quartz, and sand, as compared to 1978. At the same time, new sources will be introduced into the economy, such as titanium-zircon alluvials, rare earths, potassium salts, thermal waters, and so on.

#### Conservation and Rational Consumption of Energy

While it expands the basis of raw materials and energy, the extractive industry is also an important consumer of energy and materials. Consumptions in all areas of activity will be reduced and rationalized by introducing new technologies and modernizing existing ones. As an example of this concern, the indicator of electric power consumption per million lei of total industrial production will be lowered for the ministry as a whole, from 161 Mwh/million lei in 1975, to 123 M wh/million lei in 1985, for a reduction of about 24 percent. During the same period, the consumption of mining lumber will be reduced by about 40 percent.

Because miners, petroleum workers, and geologists are those who best know the difficulty and effort needed to extract fuels and raw materials from the depths of the earth, we take this opportunity to appeal to all units in the Ministry of Mines, Petroleum, and Geology, as well as to all other units in the country, to forcefully apply all the measures indicated by the party and state leadership for reducing consumptions, the latter being one of the important sources for meeting the needs of the national economy. At the same time, the sustained endowment and mechanization of operations will positively influence labor productivity; in 1985, this productivity will be 2.6 times higher than in 1978 in the coal sector, 2.6 times higher for non-ferrous ores, and 1.4 times higher in the ferrous ore branch.

The growing development of the extractive industry has been and is supported by the constant concern of our party and state leadership, and of Nicolae Ceausescu -- honorary miner of Valea Jiului. This concern has resulted in a continued improvement of working conditions, and of the material and intellectual standard of living of miners, petroleum workers, and geologists, together with their families. Along with the technical endowment of mines, open pits, and petroleum structures, which facilitate physical labor, the salaries of miners in the large coal and ore basins is the highest in the national economy, in accordance with the work which they perform. During the current five-year plan the salaries of miners were increased by 30.2 percent, and those of geology and drilling personnel by 35.9 percent; moreover, miners, petroleum workers, and geologists entered stage II of pay raises during August of this year, being the first in the country to benefit from these increases.

Responding to this great concern, miners, petroleum workers, and geologists are determined to do all in their power to fulfill their present and future tasks in an exemplary manner, and to supply under increasingly better conditions the resources necessary for the continued rapid development of the national economy.

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REPUBLICS' NINE-MONTH FOREIGN TRADE BALANCE

Belgrade PRIVREDNI PREGLED in Serbo-Croatian 6 Nov 79 p 5

[Article by Milorad Urosevic: "Little Time Left for Improvement"]

[Text] The coverage of imports by exports has dropped from 56 percent for the first 3 quarters of last year to 48.7 percent for the same period of this year. Somewhat better results were achieved by Serbia, with a coverage of 62.6 percent, by Bosnia-Hercegovina with 61.6 percent and by Slovenia with 58.1 percent, while the situation was most adverse in Croatia, where 44 percent of imports were covered by exports, and where the share in the country's total trade deficit was 30.4 percent.

Judging by the figures for the first 3 quarters, the improved relations between exports and imports announced since the beginning of this year has not been achieved. We must bear in mind in this connection that presentation of the percentual increase in the value of exports on the one hand and imports on the other does not reflect the true situation over brief intervals of time. This also applies to the results achieved in the month of September, when under the impact of certain measures taken by the Federal Executive Council exports rose 14 percent over August and imports dropped 23 percent, since the coverage of imports by exports, which is the most important indicator, dropped more than 7 percent between the first 3 quarters of last year and the same period of this year.

However, as emphasized in the previous surveys of foreign trade developments, within this Yugoslav average there are widely varying contributions of the various republics and provinces, from the slightly more favorable to the markedly unfavorable, as can be seen from a table obtained by using and appropriately converting the data of the Federal Bureau for Statistics for the last 3 years.

These two indicators, the size of the trade deficit and the coverage of imports by exports give a true reflection of the situation, and the comparison of this latter with achievements in the first 3 quarters of last year and the year before last indicates very significant tendencies.

### Balance of the Republics and Provinces

Sociopolitical Community	January-September 1979		Coverage of Imports by Exports in January-September Period		
	Deficit, millions of dinars	Share, %	1977	1978	1979
Yugoslavia--total	87,813	100.0	53.0	56.0	48.7
Bosnia-Hercegovina	7,495	8.5	64.8	64.9	61.6
Montenegro	2,212	2.5	75.3	43.7	38.2
Croatia	26,687	30.4	59.6	60.0	44.0
Macedonia	6,047	6.9	48.0	53.9	41.9
Slovenia	11,832	13.5	58.8	63.0	58.1
Serbia proper	12,117	13.8	56.7	67.4	62.6
Kosovo	2,274	2.6	110.6	64.2	44.9
Vojvodina	7,701	8.8	55.2	50.4	43.6
Undistributed portion of imports	11,428	13.0	--	--	--

Thus the 9-month deficit of 87,813 million dinars is 54.1 percent greater than in the same period of last year, when it was 56,985 million, but it also exceeded last year's total deficit of 9,023 million dinars and the 7,944 million dinars of the year before last. The coverage of imports by exports in the first 3 quarters of 1977 was 53 percent, during the same period last year it was 56 percent, and in 9 months of this year it dropped to only 48.7 percent. It is important to mention that what is called the undistributed part of imports, which is charged to the Federation, reached 11,428 million dinars in the first 9 months of this year, which is only 238 million, or about 2 percent, more than in the same period of last year.

### Ranking of the Republics and Provinces

The differing share of the various sociopolitical communities, only three of which have a coverage of imports by exports that exceeds the Yugoslav average, while the other five are appreciably below it, is still clearly evident in this very unfavorable situation:

- i. With a 62.6-percent coverage of imports by exports Serbia proper made the greatest contribution in keeping the trade balance from being still worse. The total for the first 3 quarters shows that its exports exceeded by 12,117 million dinars its total exports, which amounted to 20,320 million dinars, so that its share in the total deficit dropped to 13.8 percent;
- ii. Bosnia-Hercegovina was in second place, since for every 100 dinars of imports it exported 61.6 dinars worth of goods; that is, it imported 7,495 million more than its total exports of 12,041 million dinars, achieving a share of 8.5 percent in the total deficit;

iii. Slovenia had exports valued at 16,414 million dinars and created a deficit of 11,582 million, its exports covering 58.1 percent of its imports, giving it a 13.5-percent share in the Yugoslav deficit;

iv. Croatia has the least favorable balance, since for every 100 dinars of imports it managed to export only 44 dinars in the first 3 quarters. Commodity exports amounted to 20,947 million dinars, but imports were 26,687 million greater, which is 3.4 percent of the country's total deficit, and if we subtract the undistributed imports, then it would be 35 percent of the total trade deficit of all the republics and provinces;

v. Vojvodina also has a very unenviable position; its coverage of imports with exports has been dropping steadily over the last 3 years, so that in the first 3 quarters of this year it exported 5,958 million dinars, but its imports were 7,701 million dinars greater, and it accounted for 8.8 percent of the total trade deficit;

vi. With respect to the importance of its share in the country's foreign trade and also with respect to its negative results Macedonia follows with only 41.9 dinars of exports for every 100 dinars of imports, with exports totaling 4,359 million and imports that were 6,047 million dinars greater, so that its share was 6.9 percent in the Yugoslav trade deficit;

vii. Finally, we come to Montenegro and Kosovo, who have their specifically unfavorable economic position and together have a share of only 5 percent in the country's total trade deficit.

#### Causes

It was noted in mid-year that the planning expectations for this year would be appreciably exceeded with respect to the country's trade deficit and deficit in the balance of payments; since that time there have been the measures of the Federal Executive Council aimed at reducing consumption of petroleum, then prices were frozen, and in that way the effect of inflation was softened. Although relatively little time has passed since these measures were adopted, and we could not expect any very significant results so quickly, it is obvious even now that little time is left for any significant improvements before the end of the year. That is why a decision was recently adopted in the Chamber of Republics and Provinces of the Yugoslav Assembly to make amendments in the country's exchange balance and balance of payments, which in and of itself sanctions the new situation that has come about, but it also represented a step forward.

A determination was made of the causes of the growth of the country's deficit in the balance of payments; it is a consequence of a lack of respect for the agreed criterion governing establishment of the payments-balance positions of the republics and provinces and continuation of the practice for 2 years now of establishing those positions on the basis of the status quo. This kind of practice has led to an effort on the part of special-interest

communities for economic relations with foreign countries of the republics and provinces to adopt the largest possible import positions, that is, the highest possible starting point in establishing the new relations, so that in certain sociopolitical communities not only is there no struggle over why exports do not achieve greater coverage of imports, but ever more pronounced tendencies to increase imports with confidence that "someone" will have to cover it.

However, if this kind of behavior is regarded only as an extreme consequence, there are deeper reasons for it. The deficit in the balance of payments is growing not only because of higher import prices, but also because of greater imports, since the dependence of the domestic economy on foreign countries is increasing instead of shrinking, as was envisaged by the current medium-term plan. The low social productivity of labor and the rise of personal and other income of individuals regardless of the qualitative elements of economic performance are strengthening the situation on the domestic market, encouraging higher prices and inflation, and thus making the organization of associated labor in physical production less interested in exports, which involve a great risk and almost regularly bring less income than the sale of products and goods on the domestic market. On the other hand import transactions bring a more certain income not only to organizations which are importers, but also greater revenues through customs duties and taxes to sociopolitical communities, so that in this way we have a vicious cycle which will have to be broken up in the very near future. The country's trade deficit and deficit in the balance of payments achieved so far and realistically expected at the end of the year as well supply the foundation for that conclusion.

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## YUGOSLAVIA

## FOREIGN TRADE STRUCTURE, EXPORTS, IMPORTS

Belgrade EKONOMSKA POLITIKA in Serbo-Croatian 29 Oct 79 p 27

[Text] Foreign Trade January-September 1979

	Amount, mil-		Index Numbers	
	lions of dinars		<u>Jan-Sep 79</u>	
	<u>Exports</u>	<u>Imports</u>	<u>Exports</u>	<u>Imports</u>
Total	83,263	171,076	114	131
By republics:				
Bosnia-Hercegovina	12,041	19,536	132	139
Montenegro	1,370	3,582	103	105
Croatia	20,947	47,634	105	143
Macedonia	4,359	10,406	117	150
Slovenia	16,414	28,266	123	133
Serbia	28,132	50,224	110	123
Serbia proper	20,320	32,437	110	118
Kosovo	1,854	4,128	117	168
Vojvodina	5,958	13,659	109	126
By activities:				
Industry and mining	78,295	154,285	115	131
Agriculture and fishing	3,468	14,516	94	131
Forestry	873	997	121	98
By economic purposes:				
Reproduction materials	44,543	110,650	118	134
Instruments of labor	14,413	42,622	109	128
Consumer goods	24,307	17,804	109	123
By groups of countries:				
Advanced countries	35,610	100,232	123	137
Socialist countries	34,158	45,561	115	117
Developing countries	13,495	25,283	95	139

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Viewed on the basis of their source, investments from organizations of associated labor in the economy increased 24 percent from the beginning of the year up through September, investments from institutions and other organizations rose 28 percent, bank investments rose 30 percent, investments of sociopolitical communities rose 16 percent, and investments of independent special-interest communities rose 72 percent.

These developments altered the structure of investments by sources, since the share of organizations of associated labor in the economy dropped from 36 percent in the first 9 months of 1978 to 34 percent in the same period of this year, and that of sociopolitical communities dropped from 5 to 4 percent, while the share made from bank funds and other sources increased correspondingly.

**Investments in Fixed Capital, in millions of dinars**

	<u>Sep 79</u>	<u>Jan-Sep 79</u>	<u>Sep 79</u>	<u>Jan-Sep 79</u>
			<u>Sep 78</u>	<u>Jan-Sep 78</u>
Investments, total	26,008	238,571	108	127
Organizations of associated labor in the economy	9,180	80,738	109	124
Organizations of associated labor outside the economy	2,801	20,966	117	128
Independent special-interest communities	1,262	10,928	136	172
Bank funds	10,868	111,306	101	130
Placement through banks	1,416	10,374	128	106
Sociopolitical communities	481	4,259	87	116
Breakdown:				
Opstinas	249	1,994	88	129
Republics and provinces	196	1,607	118	104
Federation	36	658	34	115

The faster growth of payments from bank resources is a consequence of credit obligations assumed in previous years which are now being discharged at the price of lower liquidity. The markedly high growth of investments from the resources of independent special-interest communities was made possible because more funds were set aside for construction of housing and utilities and for construction of facilities representing the public standard of living, which are financed mostly from community consumption funds.

The investments of sociopolitical communities have diminished appreciably as a whole, especially those made from federal, republic and provincial funds. This kind of trend is in accordance with the position adopted of diminishing the functions of sociopolitical communities in the domain of expanded reproduction and of transferring those functions to associated labor. This especially applies to the Federation, whose share in total investments has dropped to only 0.3 percent.

In the breakdown by republics and provinces payments for investments increased 20 percent in Bosnia-Hercegovina, 5 percent in Montenegro, 23 percent in Croatia, 45 percent in Macedonia, 38 percent in Slovenia, 35 percent in Serbia proper, 49 percent in Kosovo and 9 percent in Vojvodina as compared to the first 9 months of last year.

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BRIEFS

KOSOVO-JORDAN FIRMS JOIN--A contract was signed yesterday in Pristina on forming a Yugoslav-Jordanian firm, the "Jord-Yug" company to be headquartered in Irbid, Jordan. Uros Seslia, director general, signed in the name of the "Eksimkos" enterprise, Director General, Fahredin Hadri signed for the "Kosovodrvo" enterprise, and Mr Subhi Asad Musmar signed in the name of the Musmar Trading Company. According to the contract, the "Jord-Yug" firm will have an initial capital of 205,000 Jordanian dinars or 13,665,300 Yugoslav dinars, or 51 percent of the investment will be Jordanian, while 49 percent will be held by the two Yugoslav enterprises. The firm will carry on export and import activity. The formation of this company is of special importance in furthering the export of Kosovo goods and other products to the Jordanian market, as well as to the Arab countries of the Near East. It is expected that a furniture salon will be opened in Irbid where products of the "Kosovodrvo" enterprise will be displayed and sold. This firm in future will also research the Jordanian market not only for wood products but also for various other Kosovo and Yugoslav products in order to sell these in Jordan and other Arab countries.

[Excerpt] [Pristina RILINDJA in Albanian 8 Nov 79 p 6]

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